3-31-2006

Continued Wetlands Assessment, Inventory and Prime Wetlands Designation in Hampton and Hampton Falls

Hampton Falls Conservation Commission

CONTINUED WETLANDS ASSESSMENT, INVENTORY, AND PRIME WETLANDS DESIGNATION IN HAMPTON AND HAMPTON FALLS

A Final Report to
The New Hampshire Estuaries Project
Submitted by the

Hampton Falls Conservation Commission in conjunction with the
Rockingham County Conservation District
110 North Road
Brentwood, NH 03833

March 31, 2006

This report was funded by a grant from the New Hampshire Estuaries Project, as authorized by the U.S. Environmental Protection Agency pursuant to Section 320 of the Clean Water Act.

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- *Hampton Prime Wetland NH Method Data Sheets, Gove Environmental Services, Inc., dated March 31, 2006.

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Executive Summary and Introduction

The purpose of this project was to continue to provide educational efforts on wetlands functions and values, prime wetlands designation, aerial and on-the-ground inventory findings, wildlife habitat, and New Hampshire's Prime Wetlands laws and rules for the communities of Hampton and Hampton Falls, which was the project focus area. The project incorporated the first phase (phase I) of this wetland inventory report, which focused on the Taylor River Watershed. That initial assessment included the Taylor River as it flows through both Hampton and Hampton Falls, a portion of Ash Brook and Old River as it flows through Hampton, and Grapevine Run as it flows through Hampton Falls. The map boundaries and functional assessment data from phase I have been integrated into this analysis to create a comprehensive report covering the entirety of the municipalities. This project assessed all of the wetland areas greater than 2 acres that occurred in each community, and included a comprehensive wetland resource assessment of the top 20 wetland complexes in both communities (Appendix A). A NH Certified Wetland Scientist was hired by the Town of Hampton Falls to incorporate the existing wetlands assessment, to complete an inventory of all wetlands in both communities (greater than 2 acres), and to identify individual wetland areas or complexes that were potentially suitable for prime wetlands designation. Once that assessment was completed, eight distinct areas were initially chosen as potential candidates for prime wetlands designation, and a functions and values assessment was conducted on each candidate. The *Continued Wetlands Assessment, Inventory, and Prime Wetland Designation in Hampton and Hampton Falls Project* offered substantial education and outreach to both conservation commissions, residents, and municipal officials, and was successful in helping individuals in each community to understand the importance of the functions and values, the significant natural and coastal resources that remain in each community, and the importance of promoting one or more prime wetland candidate(s) slated for March of 2007. Representatives from each of the conservation commissions have already set a meeting date to evaluate which candidates they hope to move forward with for warrant articles. In fact, the Hampton Conservation Commission has already begun a power point presentation to give to town officials in the fall of 2006 regarding passage of the article designating prime wetlands (Appendix D). Moreover, the two towns remain committed to working together on this process as many of the wetland candidates cross political boundaries.

Due to the timing in finalizing this project, no warrant articles were prepared for town meeting for either community, and consequently there were no prime wetlands application submissions to the NH Department of Environmental Services (DES) completed during the length of this project. However, conservation commission members became thoroughly educated on prime wetlands designation, and both communities have agreed that the most appropriate step to have taken was to evaluate each community in its entirety. Moreover, both commissions understand that the educational initiatives are imperative, and that they must chose the prime wetland candidates that will be presented in March of 2007 very carefully. They have jointly agreed to voluntarily continue educating residents in the fall of 2006 regarding the proposed candidates for prime wetland designation. Another amazing outcome of this

project is that in part due to this complete project (both phases) and as a follow up to a formerly funded project by the New Hampshire Estuaries Project (NHEP) on shoreland protection, there are landowners in both communities that are interested in participating in permanent protection efforts. The educational efforts on wetland functions and values, the importance of protecting prime habitat, and on NH RSA 482 and Chapter Wt 700 of the NH DES Administrative Rules regarding the law and rules has brought much interest on this topic in both communities. All of the outcomes from the *Continued Wetlands Assessment, Inventory, and Prime Wetland Designation in Hampton and Hampton Falls Project* have given both communities a renewed sense of the importance of stewardship, understanding, documenting, and protecting critical natural resources.

Project Goals and Objectives

This project involved two main phases:

1) Public informational meetings and educational initiatives to promote awareness of the NHEP Management Plan, functions and values of wetlands, habitat assessment, and the law at the local and state level for prime wetlands designation, and what it means to landowners took place throughout the project. This phase included several informal and formal public workshops held in both Hampton Falls and Hampton on all of the above-mentioned topics.

2) Hiring a NH Certified Wetland Scientist to incorporate the existing map boundaries and wetlands assessment data from the Taylor River Watershed project, to complete the wetlands inventory and assessment, to identify wetlands potentially suitable for prime wetlands designation, and to complete a functions and values assessment of each of the prime wetland candidates by using the *Method for Comparative Evaluation of Nontidal Wetlands in New Hampshire (NH Method) (1991).* This phase included generic language for a local warrant article, but did not include the drafting of local warrant articles due to the timeframe of receiving the finalized data. It was decided by both communities to jointly carry out additional educational initiatives and move forward with corresponding and specific candidate(s) for potential prime wetlands designation in March of 2007. This phase included the coordination, review, and comment of draft information/reports, and the decision to continue with educational efforts and cooperatively promote prime wetlands designation in 2007.

Activities

As it was with the first phase, it is important to note that the success of this entire project involved the collaboration of a variety of natural resource groups and agencies. The UNH Cooperative Extension and the NH Department of Environmental Services (DES) assisted with outreach and educational efforts. Also the Rockingham County Conservation District (RCCD) assisted with the coordination and public outreach of the entire project. Although the result (i.e., passed warrant articles for the local designation of prime wetland candidates) was not reached during the timeframe of this project,

significant advances on educating residents and municipal officials on wetlands functions and values, and on the law regarding prime wetlands occurred. As with many land protection projects, it can take several educational initiatives (and time) for individuals to understand and to support prime wetland candidate designation. If proposals are passed in March of 2007, this will represent significant accomplishments of this project, which would not have been possible without the support of the New Hampshire Estuaries Project (NHEP). The most significant accomplishments that did occur during this project are bulleted for informational purposes. It should be noted that all parties involved in each of the documented tasks have expended a substantial amount of time, effort, energy, and resources.

- RCCD coordinated with the Towns of Hampton and Hampton Falls on organizing and completing a timeline for the entire project, with expected outcomes at each quarter. This timeline was also presented to NHEP to ensure that the considerable public outreach component was appropriate.

- RCCD coordinated with the Towns of Hampton and Hampton Falls on drafting and receiving comments/edits on a Request for Proposal (RFP), and both commission members as well as the Town Administrator from Hampton Falls had comments that were included. The final RFP was sent to qualified individuals or companies to include existing map boundaries and wetland assessment data for the Taylor River Watershed, and to complete the inventory, assessment, delineation, mapping, and designation of possible prime wetland candidates for both communities in their entirety as shown in Appendix A (provided in previous reports). Applicants responded in May of 2005, and the RCCD coordinated reviews and interviews with possible candidates. After negotiations, Gove Environmental Services, Inc. was selected by the Town of Hampton Falls, and work on the project began in August of 2005.

- RCCD organized and provided public relations on an introductory workshop on the NHEP Management Plan, the overall project, and on information on Prime Wetlands Designation at the local and state level in Hampton Falls in May of 2005. The program brochure was distributed throughout both communities, presented on local access cable, and provided to local newspapers for distribution (provided in previous reports). NHEP staff as well as staff from a local newspaper attended this meeting. During this meeting it was indicated that assistance from NH DES, NHEP, UNH Cooperative Extension, and the RCCD would be essential for the overall success of this project.

- Once work was initiated, additional meetings and informal gatherings took place with the wetland consultant and members of both commissions to determine the progression of this project. Due to the size and scope of this project individual letters were not sent to residents regarding this project. Instead, for spot checks and/or necessary field visits, the wetland consultant made direct contact with landowners.

- RCCD met and discussed the status of this project with both Conservation Commissions and the wetland consultant. The wetland consultant completed the aerial photographic interpretation and then Geographic Information Systems (GIS) Analysis, with over seventy-five full aerial photographs used to cover both communities (see Appendix C). RCCD met with the Rockingham Planning Commission (RPC) to discuss being hired by both communities to take digital photographs of possible prime wetland candidates. Both communities agreed that taking photographs during the growing season would be an important educational and public relations component for potential warrant articles. It was decided by each community to hire the RPC to work with the wetland consultant and take approximate GPS locations into the field and then to photograph wetland complexes and then once in the field be able to provide more exact GPS locations. The RPC would process the data and provide it to each community so that photographs could be inserted into a GIS map or other appropriate documents to show proposed prime wetland candidates (see Appendix C).

- ❖ RCCD organized and coordinated a second public meeting to discuss the initial findings of the wetland assessment and what data had been collected, and habitat assessment and management/conservation options with regard to the resources found in both communities. This meeting took place on October 18th in Hampton and was well attended. UNH Cooperative Extension staff and the wetland consultant prepared a presentation that was excellent. There were several excellent questions put forward at this meeting and were free ranging - from general open space protection, wetlands habitat, habitat protection for homeowners, to other local and state laws that are relevant and other organizations that participate in natural resource restoration and/or protection projects. The questions that were put forth by the audience indicated that residents in fact needed additional education on this topic. A couple of high school students from Winnacunnet High School also attended and were integrating this wetlands assessment project into a class project. The program brochure was distributed throughout both communities, presented on local access cable, and provided to local newspapers for distribution.

- ❖ All wetland complexes greater than 2 acres were reviewed by the wetland consultant that met the criteria for prime wetland designation, which includes: 1) that wetlands must meet the standard regulatory definition of wetlands, i.e. they must have the presence of hydric soils, hydrophytic vegetation, and wetlands hydrology, and 2) that at least 50% of the candidate wetland must have Type A Hydric Soils, and the remaining soils must be Type B Hydric Soils. Additionally, all tidal marsh complexes were included as candidates for prime wetlands designation at the onset of this project essentially due to their size, rarity, and ecological superiority.

- ❖ Using these criteria the wetland consultant initially put forth twenty wetland complexes selected for evaluation and consideration for potential prime wetland designation, with 11 being located in Hampton Falls and 9 located in Hampton. After a couple of additional meetings and additional review of the available data, those wetland complexes were effectively condensed into eight initial candidate wetland complexes that would be evaluated using the NH Method (*Method for Comparative Evaluation of Nontidal Wetlands in New Hampshire) (1991).*

- ❖ For this study, all fourteen wetland functions and values outlined in the NH Method were evaluated for each of the candidate wetland complexes chosen that were not salt marsh. More detailed information on each of the wetland functions and values for each wetland complex chosen can be found in Appendix C, and include:

- Ecological Integrity – Evaluates the overall health and function of the wetland ecosystem;
- Wetland Wildlife Habitat – Evaluates the suitability of the wetland as habitat for those animals typically associated with wetlands and wetland edges;
- Finfish Habitat – Evaluates the suitability of watercourses, ponds, or lakes associated with the wetland for either warm water or cold water fish;
- Education Potential – Evaluates the suitability of the wetland as a site for an “outdoor classroom”;
- Visual/Aesthetic Quality – Evaluates the visual and aesthetic quality of the wetland;
- Water-Based Recreation – Evaluates the suitability of the wetland and associated watercourses for non-powered boating, fishing, and other similar recreational activities;
- Flood Control Potential – Evaluates the effectiveness of the wetland in storing floodwaters and reducing downstream flood peaks;

- Groundwater Use Potential – Evaluates the potential use of the underlying aquifer as a drinking water supply;
- Sediment Trapping – Evaluates the potential of the wetland to trap sediment in runoff water from surrounding upland;
- Nutrient Attenuation – Evaluates the potential of the wetland to reduce the impacts of excess nutrients in runoff water on downstream lakes and streams;
- Shoreline Anchoring and Dissipation of Erosive Forces – Evaluates the effectiveness of the wetland in preventing shoreline erosion;
- Urban Quality of Life – Evaluates the potential for the wetland to enhance the quality of urban life by providing wildlife habitat and other natural values in an urban setting;
- Historical Site Potential – Evaluates for indications of use by early settlers;
- Noteworthiness – Evaluates the wetland for certain special values such as critical habitat for endangered species, or exemplary natural communities, etc.

❖ Throughout the entire project the RCCD staff met with representatives from both the Towns of Hampton and Hampton Falls. RCCD was in constant contact with the wetland consultant during the entire project to ensure project timeframes and expected outcomes were delivered. RCCD provided information to several members of the public on the overall project, and on the educational initiatives that were being arranged. This aspect of the project involved several personal contacts with RCCD, as well as numerous email and phone conversations, and additional meetings.

❖ Once the NH Method was completed for each of the proposed chosen candidate wetland complexes, RCCD organized and coordinated the final public workshop to present the results of the findings, and to discuss prime wetlands designation laws and regulations (at the local and state level). The final workshop was initially slated for January 31st to take place in Hampton Falls. Unfortunately, that workshop was snowed out. The final workshop took place on March 6th in Hampton Falls, and was very well attended. The program brochure was distributed throughout both communities, presented on local access cable, and provided to local newspapers for distribution (see Appendix B).

❖ Several additional meetings took place near the end of the project, and proposed wetland areas to be designated as prime were reviewed by commission members in both towns, with comments being provided to the wetland consultant. By January, the data was not completely finalized, and as an extension was allowed by the NHEP, it was jointly decided to postpone the drafting of local warrant articles until 2007. Therefore, no specific warrant articles were drafted for either town, although a generic warrant article is provided for in Appendix B. The required mapping components for both communities were completed, but were not put forward for town meeting vote or for submittal for prime wetlands designation to NH DES (see Appendix C). This information will be utilized in the fall of 2006 in preparation for warrant articles that will be submitted.

❖ From the completed analysis using the initial 20 areas, the wetland consultant recommended a total of 8 areas to be designated as prime wetlands candidates, with four areas proposed in each community. In Hampton, there were three areas proposed that are tidal and did not receive the analysis completed using the NH Method (*Method for Comparative Evaluation of Nontidal Wetlands in New Hampshire (1991).* In Hampton Falls, there were three non-tidal areas evaluated, and one tidal area recommended (see Appendix C). A final report was prepared for both communities and submitted a couple of weeks before the final presentation was presented to the public (see Appendix C).

- A final presentation was presented with the NH DES and the wetland scientist, which discussed the entire project, the final data and findings, as well as the law as it pertains to prime wetlands designations. It would have been helpful to have another draft presentation meeting prior to the final public presentation. This was essentially the first time that the commission members viewed the finalized data, and there were additional questions regarding the data, photographs, appearance of data on GIS maps, and other questions residents of both communities had regarding the information presented.

- The final presentation was well received by all that attended, and there were several excellent questions presented by those in attendance (see Appendix B). There were many interested residents from both communities, and the overall response from many of the residents attending was that they were enthusiastic about the continued educational efforts, and that warrant articles would be proposed in 2007 (see Appendix B). In addition, through the educational efforts, at least two residents have contacted each commission with a strong interest in permanent protection efforts. In fact one conservation project involves a parcel on the Taylor River with an estimated closing date of the summer of 2006.

- Given the additional time allotted for this project, members from both Commissions were able to spend a great amount of time reviewing the prepared final report. Commission members and RCCD staff thoroughly reviewed the document and provided comments to the wetland scientist, indicating items that needed to be changed/reviewed and/or provided (see Appendix B). It was indicated that the document itself as well as the information it contains must be accurate, useful, and support both towns as they prepare to cooperatively approach presenting warrant articles for prime wetlands designation in 2007. This, in fact, was one of the most important accomplishments, as both communities really took stewardship of the natural resources in each community and asked significant questions regarding the presentation of the data. The wetland consultant then addressed those comments in an addendum package (see Appendix C).

- All of these accomplishments are due to the success of the educational efforts and technical assistance provided under both phases of this project. The end result (although no passage of warrant articles) included commission members having more grounded stewardship of wetland resources that was due to the *Continued Wetlands Assessment, Inventory, and Prime Wetland Designation in Hampton and Hampton Falls Project*.

Results and Discussion

The two main objectives at the onset of the *Continued Wetlands Assessment, Inventory, and Prime Wetland Designation in Hampton and Hampton Falls Project* have been achieved. The variety of workshops offered were well attended with valuable information provided, and excellent questions asked by the various participants. Considerable educational efforts on the importance of wetland resources, and municipal options for documenting and potentially protecting these natural resources were provided to a well receiving audience. The outcome from these educational efforts led both communities to have tremendous support for additional educational efforts and to cooperatively move forward with warrant articles in the fall of 2006, with hopeful passage in March of 2007. In fact, the Town of Hampton has already begun preparation of a power point presentation to assist with that educational effort (see Appendix D). Through the continued educational efforts many residents became more aware of wildlife habitat, the importance of coastal and riverine protection, and of the special values and functions that these noteworthy natural resources possess. Increasing the awareness of natural resources and of options to protect those resources

among both municipal officials and community members proved to be an outstanding success again.

A strong similarity between each communities' success from this project was in the recognition of the importance and uniqueness of the disappearing shoreland/riverine resources within these communities. Moreover, the coverage of the initially chosen eight prime wetland candidate boundaries clearly extends beyond town borders (and beyond the towns involved in this project). This continues to be a critical opportunity for each of the communities to collaborate with each other and adjacent communities in these areas to expand the educational initiatives, and to assist in further protection of these resources. Any enhancement or expansion of educational and protection opportunities would clearly benefit the entire health of the NH Coastal Watershed.

Both communities are pleased to be getting additional information and data that relates to the health and uniqueness of the proposed candidates for prime wetlands designation. This information will definitely support these communities as they move forward with funding requests for restoration opportunities, warrant articles, or propose new management initiatives to enhance and protect natural resources located within these proposed areas. This information also will provide additional support to coordinate and cooperate on joint natural resource ventures or conservation projects between these and adjacent communities. In fact, the educational programs provided for during the length of this project brought forth at least two new landowners interested in permanent protection options. With the technical assistance provided for under this project, and the knowledge gained on the critical natural resources located in each of these two communities, both communities have succeeded with educating themselves, as well as many of the residents. It is essential to help residents better understand, appreciate, and become better stewards of our natural resources, and should be considered the ultimate success. Another success of the *Continued Wetlands Assessment, Inventory, and Prime Wetland Designation in Hampton and Hampton Falls Project* is that the information provided for in this inventory and assessment will allow each community to make more informed land-use decisions, as well as to continue to educate and inform residents about these unique natural resources.

It is interesting to note that this project has motivated both Conservation Commissions to continue to voluntarily educate residents about these important wetland resources, which will continue into at least the next year. With all of the data now covering both communities in their entirety, members are now jointly enthusiastic to continue with educational initiatives on wetland resources and protection options, and to promote passage of warrant articles. This would not likely have occurred if the significant educational and outreach efforts during the past two years had not been completed.

The Hampton and Hampton Falls Conservation Commissions are now motivated to continue with comprehensive educational efforts within each community, with assistance from those agencies and groups that have been working with them throughout this project. The overall project has allowed both communities to advocate for critical resource identification, protection options and techniques, and has clearly

strengthened the local capacity of both Conservation Commissions. Members of both communities appreciate the ability to assist landowners in town with information on natural resources in each community, and on options of how they may protect them.

The Towns of Hampton and Hampton Falls have significantly expanded their conservation capacity through the *Continued Wetlands Assessment, Inventory, and Prime Wetland Designation in Hampton and Hampton Falls Project*. Most of all, both Conservation Commissions are now ready to continue with additional wetland resource educational opportunities, and to coordinate on these efforts both amongst themselves, with adjoining communities, and with residents. All of these positive outcomes are the direct result of the *Continued Wetlands Assessment, Inventory, and Prime Wetland Designation in Hampton and Hampton Falls Project*. It is very likely that this effort will be a catalyst for additional enhancement and perhaps protection efforts in both communities, and hopefully will extend to adjacent communities within the Hampton Harbor and NH Coastal Watersheds.

Conclusions

The *Continued Wetlands Assessment, Inventory, and Prime Wetland Designation in Hampton and Hampton Falls Project* has ended successfully. The conservation commission members that have been involved with this project have strengthened their capacity to educate residents on critical wetland resources, conservation and management options, and the laws and rules regarding prime wetlands designation at the local and state level. Obviously, the results achieved from a passed local warrant article designating prime wetlands in each community would have highlighted the ultimate success of this project. However, as with many land protection projects, being able to move forward with appropriate and supported warrant articles can often take a long time. So both communities are pleased to be moving forward in continuing to educate residents on these unique and valuable resources, and on supporting prime wetlands designation as well as other options to protect these resources. The intent is to put forward warrant articles and have areas designated in March of 2007. If this occurs, it would be a significant accomplishment for the health of the entire NH Coastal Watershed. As there are increased requests for technical assistance for these types of services throughout Rockingham County, the RCCD advocates that this type of technical assistance, with its resultant positive benefits should be considered another accomplishment of this project.

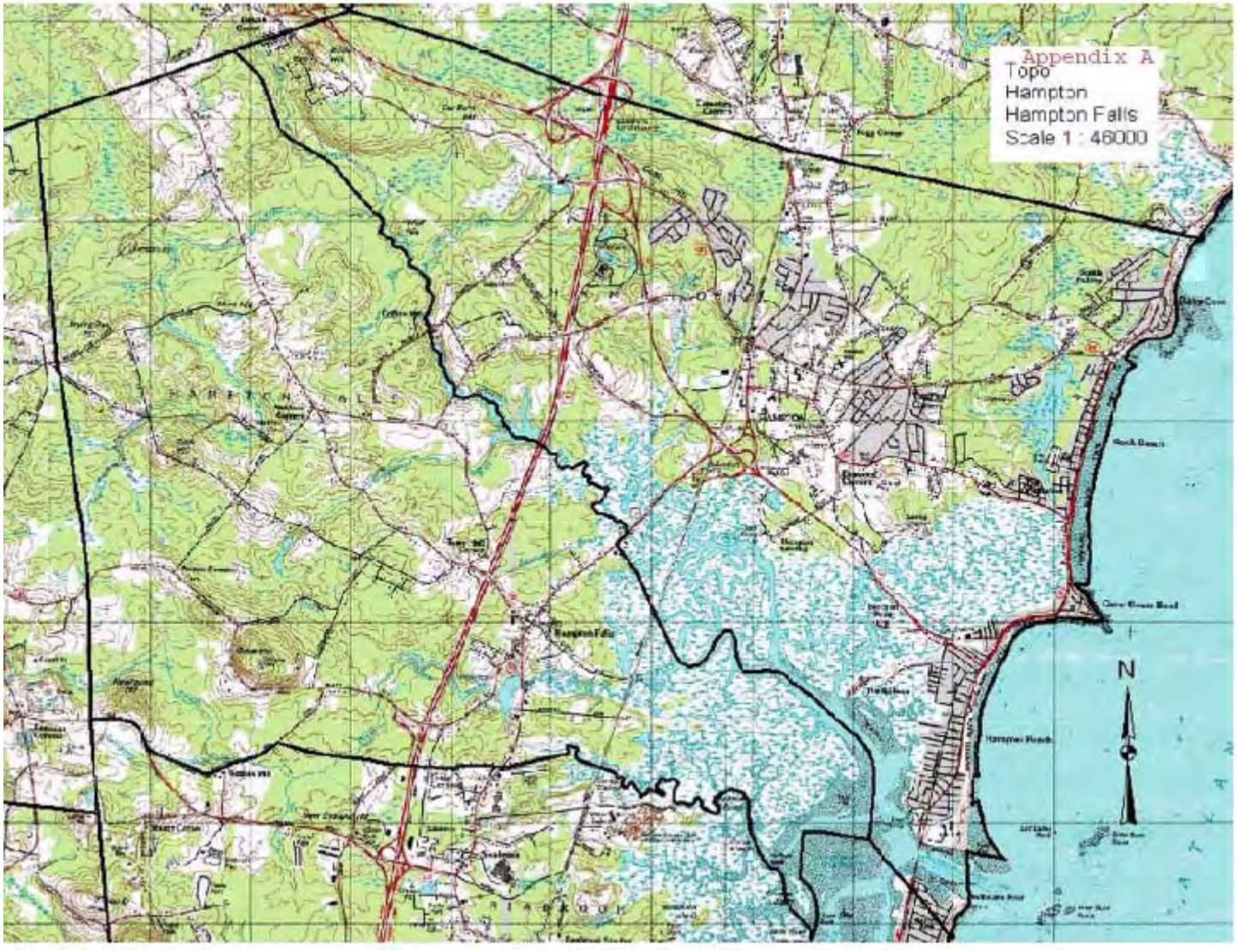
Recommendations

Through the completion of this project, the conservation commissions are recognizing the importance of having accurate natural resource data. The higher the quality of data available to them, the more informed they can be with both land-use decisions and with their recommendations or requests to others. The ability to offer stronger protection measures provides these communities a greater chance at permanently protecting these significant natural resources. This must be completed using a thought out

approach, with accurate data to back up those recommendations. With more accurate data and new resource recommendations, communities may be able to obtain support for protective overlay zones, prime wetlands designation, and possibly additional funds for completing tangle resource projects. These types of projects can be supported by the data, and may be more readily completed if additional funds were requested or provided to the conservation commissions.

All of the components of this project led to significant educational opportunities for all involved, and that continues to be a most impressive outcome. The considerable outreach and educational efforts that resulted achieved significant conservation enthusiasm within both communities. Moreover, any further conservation or natural resource projects that are implemented because of this project will emphasize the importance of this work and the importance of the stewardship of the natural resources within each community, and within the NH Coastal Watershed. This result not only benefits the communities involved, but also benefits all that live and enjoy in the NH Coastal Watershed.

Appendix A


Appendix A
Topo
Hampton
Hampton Falls
Scale 1 : 46000
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Appendix B

The Hampton Falls Conservation Commission in conjunction with the Hampton Conservation Commission

Invites all interested residents to an informational discussion on

Wetlands Assessment & Prime Wetlands Designation Project

Final Findings
&
What Does Prime Wetlands Designation mean - The Law

Monday, March 6th
Hampton Falls Town Office
1 Drinkwater Road, Hampton Falls
7:00—9:00 p.m.

A presentation by Jeffrey Cantara, Project Manager of Gove Environmental Services, Inc. on the findings of the assessment and inventory of wetlands with final draft maps, final candidates for prime wetlands designation, and photographs. Followed by Sandy Crystall, Senior Resources Manager, NHDES, Wetlands Bureau who will discuss what prime wetlands designation means, and answer any questions on the law.

Refreshments will be provided

Please contact Tracy Healy Beattie, Chair of the Hampton Falls Conservation Commission @ 926-1626 or email Tracy Degnan, RCCD @ rccdted@ttlc.net with any questions.

Support for this workshop has been provided by the New Hampshire Estuaries Project

HAMPTON AND HAMPTON FALLS WETLAND INVENTORY
Sample Prime Wetland Warrant Article Language

ARTICLE X

Shall the Town adopt the Planning Board Article to designate Prime Wetlands, a local option under RSA 482-A:15, as delineated by Town of Hampton and Hampton Falls Prime Wetlands Study and Mapping by Gove Environmental Services, Inc., and dated _____, and as recommended by the Hampton [Hampton Falls] Conservation Commission? ***Recommended by the Planning Board***

Subject: Prime Wetlands Study
From: "Nancy Roka" <roka@comcast.net>
Date: Mon, 27 Mar 2006 12:05:39 -0500
To: "Ellen Goethel" <egoethel@comcast.net>, "Jeff Cantara" <jcantara@gesinc.biz>, "Tracy Degnan \(home\)" <tracyedegnan@comcast.net>, "Tracy Degnan" <rccdted@ttlc.net>, "Tracy Beattie" <Edwardbb@comcast.net>
CC: "David Gant" <dgandt@comcast.net>, "Karen Ayers" <kayersnh@comcast.net>, "Larry Smith" <larry.smith20@comcast.net>, "Greg Smart" <g-hsmart@comcast.net>, "Elizabeth Volpone" <evolpone@comcast.net>, "Robert K. Wiener" <robert@grantbooks.com>

Hello Jeff-

I have (finally) reviewed the report that you have provided on the Prime Wetlands Study for the Towns of Hampton and Hampton Falls and am providing comments/questions herein. I do apologize for their tardiness and, therefore, the lack of opportunity for others to review what I have commented on.

Before I get into the comments, I want to say thank you for all your work on this project... it was a huge effort and your presentations during meetings were focused and put together very well. Since I was usually (and unfortunately) the first one to leave our meetings, I rarely had an opportunity to thank you in person. I had hoped for a little more detail on the conclusions and less of the general information in this very last meeting, but that being said I appreciated your effort to boil a lot of technical information down into hour increments.

The following comments are intended to supplement those provided by Tracy Degnan under separate cover, dated March 17, 2006. I will also provide these comments via letter, but wanted to email them to you to expedite their delivery. I thought the report was generally well written with an easy-to-follow writing style. While my intent was not to be searching closely for editorial purposes, I did make note of a few minor editorial things.

1. It would be helpful to have page numbers, section numbers, and a Table of Contents.
2. The NH NHI changed their name in the last couple of years... I believe they are now refered to as the NH NHB?
3. Page 4, 2nd line: specie --> species.
4. Page 4, Field Work Analysis - This section describes orthophoto and map interpretation. There is no actual discussion of field activities, except you do say elsewhere that the NH Method was used to complete an on-site analysis of the functions and values of the wetland complexes. Can you provide some general discussion of the field activities, including dates or time periods of field events, where field activities were focused if any particular areas required more intensive study, and what generally happened during field activities. You could mention that photos were taken and reference the photos in the Exhibits. It would be helpful to show on the Exhibits how photos were oriented in the field.
5. There are some new conservation lands that have not made it into the GRANIT database and are not shown on the Exhibits. Here are a few that I could think of:
    - Hampton Falls, Map 5 Lot 14 - Applecrest Farm Orchards. This one may be significant because it overlaps the Grapevine Run Complex.
    - Hampton Falls, Map 2 Lot 61 - Janvrin Woods
    - Hampton Falls, Map 5 Lot 41 (I think) - Hurd Farm
    - Hampton, Map __ Lot __ - Hurd Farm (Ellen?)
6. Road names - as Tracy D. pointed out, some of the roads are not labelled correctly... an artifact of NHDOT roads layer in GRANIT. I tried to further clarify some of the mis-labelled roads on a

map that I may try to get to you electronically, but if time permits you might do better by contacting the RPC (Dave Wycliffe or Tom Falk?) and getting the GIS roads layer that they maintain... it's kept more up to date. A lot of the recent (and not so recent) subdivision roads are not shown on the maps.

7. The Hampton Falls River Complex may be better named as the Upper Hampton Falls River Complex? (if it in fact goes that far upstream... the part of the river that I am most familiar with is downstream of the Dodge Ponds where the old mills are located, between Rte. 95 and where it enters the marsh).
8. Exhibit 16 - was the photo shown here perhaps taken from the end of Depot Road (it looks like that familiar vantage point).
9. Exhibit 17 - there seems to be a large area of wetlands as part of the Taylor River - East complex (in Hampton) that ends abruptly at the town line and does not continue into Hampton Falls as part of the Taylor River - Central complex. If time permits, could you retrace that wetland boundary and include it on the GIS layer for the Taylor River - Central complex? The area is approximately due north of Linden Road and due east of a conservation parcel.
10. Exhibit 26 - 3 photolocations are shown, but only 2 photos are provided. The photolocation key also needs to be shown on the legend.
11. Exhibit 27 - where were these photos taken?
12. Discussion of fuction/value 7 refers to "four candidate wetlands complexes...". Please re-evaluate this text relative to this study.
13. Exhibit 28 - Since the scale on the legend goes from "High Quality" to "Recommended Prime Wetland", are we to assume that low quality and medium quality candidates don't exist? Are high and very high quality wetlands not recommended for prime status? A description or further definition of this scale on the exhibit itself would be very useful since this exhibit is crucial and will be the focal point for future reference.
14. As Tracy D. noted, please reconsider the recommendation for prime status for the Cove complex and the Taylor River Headwaters complex in Hampton Falls. Their overall scores seem more consistent with those that are recommended for prime status than those that are not. I don't recall defining a threshold score or establishing criteria that would have differentiated them from the other 3 that scored higher, but if there is reason perhaps you should discuss it in more detail in the text.
15. Discussion of Significant Wetland Value Habitat - I think the discussion of vernal pools *is* relevent as it relates to the issue of uplands adjacent to prime wetlands, but I think stating that no vernal pools were documented as part of the study might lead readers to the wrong conclusion... in all likelihood there are probably many vernal pools in the uplands adjacent to the wetland complexes. Not only would the time of year have made identification of these sensitive habitats difficult, but I doubt the scope of the study and the field effort really allowed for a thorough review of potential vernal pool habitat. Perhaps this wording could be modified to downplay the lack of vernal pools found in the study areas.
16. Doesn't accessibility play a factor in considering aesthetics? I'm surprised Winkley Brook scored the highest as it is least accessible in Hampton Falls (same goes for recreational value, urban educational opportunity, and urban visual & aesthetic value). Or is size simply the critical factor here?
17. I'm surprised the Hampton Falls River Complex didn't score higher for historical potential... some of the oldest mills in New England were located on this river at the falls (for which Hampton Falls is named), plus there is the chapel, all of which are located on or adjacent to the Governor Powell property. Or is size simply the limiting factor?

That's all (or more aptly, that's enough!). I would be happy to discuss anything I've commented on with you. You can reach me at 929-5006 or on my cell at 661-1171.

Thanks again, Jeff. Regards- Nancy

ROCKINGHAM COUNTY CONSERVATION DISTRICT

110 North Road
Brentwood, NH 03833-6614
TEL 603-679-2790 FAX 603-679-2860

March 17, 2006

Jeff Cantara
Gove Environmental Services, Inc.
118 Portsmouth Avenue, Ste B201
Stratham, NH 03885-2487

Re: Review of Prime Wetland Inventory Report for Hampton and Hampton Falls

Dear Jeff:

Thank you for your continued assistance with the wetlands assessment and for the information that you have provided on potential prime wetland candidates for the Towns of Hampton and Hampton Falls.

Members from both Conservation Commissions have had several days to review this document, and would like clarification on a few items. We would appreciate clarification in writing and additional documents provided to RCCD prior to March 31st as this is the end of the requested funding extension.

It is important that we finalize this project properly as significant public money is being spent on this project, and funding requirements necessitate additional information be provided. The following areas include work products provided that need additional information or to be further addressed. Please note that there are component related questions from each town as well as general comments on information provided.

1. The Town of Hampton Falls is particularly interested in why the Cove Complex, and the Taylor River Headwaters area were not included in the prime candidate recommendations, particularly as the Total Wetland Value units were much more closely aligned to the recommended candidates than the four remaining lower acreage and lower valued sites. It is requested that you reevaluate/recalculate these two significant wetland complexes and include an addendum for the final reports.

2. The Town of Hampton has additional information on the Lamprey Pond complex, and it is suggested that the educational potential, water based recreational component, and historical site potential be re-reviewed and updated for this report, which may or may not change the relative ranking for a prime wetland candidate.

3. The suggested priorities for protection as it relates to each recommended wetland complex was to include specific restoration opportunities and recommendations for applicable candidates, and any other recommendations for habitat management in writing. This has not been provided for the recommended candidates. In fact, the majority of the language provided in the Habitat, Conservation and Restoration Opportunities Section is the same text used in the Taylor River Watershed Wetland Inventory report produced in 2004. There should be additional significant wetland habitats discussed in this recent report beyond vernal pools, particularly if no vernal pools were identified. We request that this entire section of the current report be readdressed, refined, and submitted as an addendum for the final reports.

4. The report is to provide mapping and language for warrant article(s) for possible candidates for Prime Wetlands Designation for both communities. This requires that town tax data be overlaid on each of the recommended prime wetland candidates and provided as an addendum for the final reports (as well as digitally).

5. There are four street names on the maps that are incorrect and need to be fixed on the final product. An attached Road Atlas map produced in 2001 shows the correct names and locations – specifically Towle Farm Road (listed as Drakeside Road) and Timber Swamp Road (listed as Guinea Road) are incorrect. The correct road names were indicated during the initial discussion on the proposed prime wetlands candidates.

6. Provide all final textual, graphic documents and required mapping components for prime wetlands application to the State of New Hampshire, with three additional copies to be provided to each community at the end of project. An additional full copy should be provided to each community.

There are a few other minor changes that also should be corrected or at least addressed. Within the Wetland Mapping Process text, the text is essentially the same text as Phase I, with notations of the Taylor River Watershed Inventory. This language should be corrected. Another general question has to do with the photographs that were taken. It is difficult to tell if the GPS points are from Gove Environmental Services, Inc. or from the Rockingham Planning Commission (who took digital photographs), as the yellow crosses are often in the middle of the wetland complex. There are also several maps that do not have any crosses – and maps where the crosses are not within the legend. This should also be addressed.

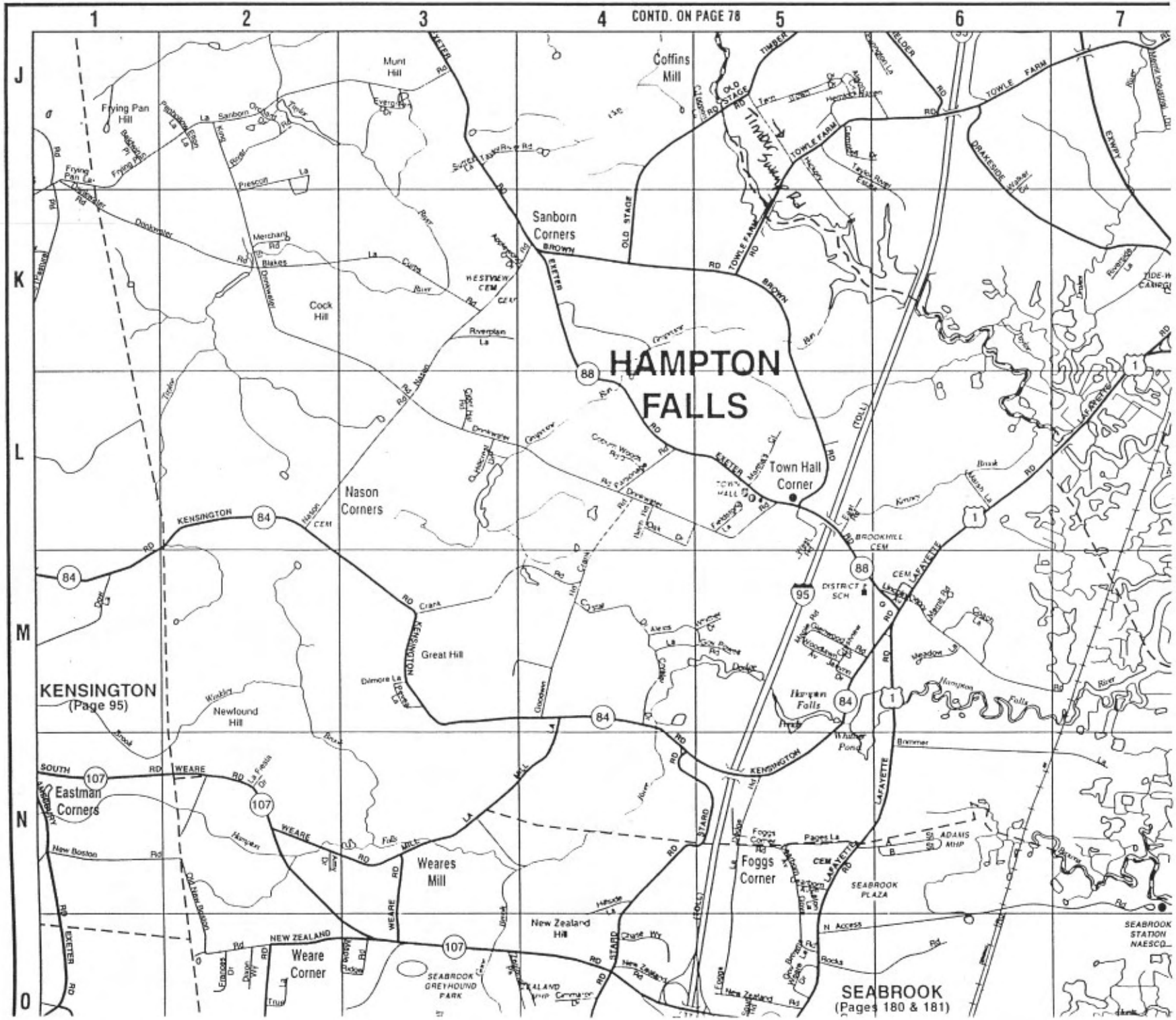
We hope that you understand the importance of finalizing this document correctly. Both communities plan to utilize this information to the greatest extent possible in moving forward with educating the general public and in promoting warrant articles for prime wetland candidate designation. That is why the information must be presented accurately. We appreciate your continued assistance in helping us achieve our conservation goals. If you have any questions, please don't hesitate to contact me, or the chairs of each Conservation Commission.

Sincerely,

Tracy Degnan

Tracy Degnan
Conservation Specialist

Enclosure
Cc: HF CC; Hampton CC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Great Hill
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Weares Mill
Foggs Corner
New Zealand Hill
Weare Corner
SEABROOK GREYHOUND PARK
SEABROOK PLAZA
SEABROOK STATION NAESCO
KENSINGTON
(Page 95)
SEABROOK
(Pages 180 & 181)
Timber Swamp Rd
Towle Farm Rd
Old Stage Rd
Exeter Rd
Kensington Rd
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Taylor River Estates
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Towle Farm Estates
Riverplain Estates
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Function/Value 11: Shoreline Anchoring and Dissipation of Erosive Forces

When water levels in streams and rivers are high, significant erosive forces can act upon stream banks and lakeshores. One of the best countermeasures to these forces is dense natural vegetation. Thick root mats greatly strengthen and reinforce the soil that make up streambanks. As a result, slumping from undercut banks and general erosion is significantly reduced. Because of this, the potential for sediment to choke fish spawning areas is minimized and streams are also able to maintain their natural channel character to a greater extent. This function is measured by assessing vegetation density. Please reference Exhibit 39 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 12: Urban Quality of Life

Because urban wetlands may not perform certain wetland functions as well as those in less developed areas, they tend to rank lower in several values including ecological integrity, wetland wildlife habitat and visual/aesthetic quality. However, these urban wetlands may actually have considerable value when considered in the context of the surrounding urban land. For example, some wetlands may be among the last refuges for wildlife or may also provide some of the few remaining viewscapes. In that context urban wetlands can enhance the quality of human life in an urban setting. The New Hampshire Method attempts to recognize these factors by measuring this Functional Value. While neither Hampton Falls nor Hampton can be considered urban, both communities are experiencing rapid growth. As a result, this portion of the assessment may become more important as time passes. This portion of the analysis typically re-assesses earlier portions of the report with an eye to the landscape and cultural context of the study area. Please reference Exhibit 40 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 13: Historical Site Potential

Although most other factors consider present uses and values of the wetlands, the wetlands also may have provided value to those who lived there in the past. Early settlers made extensive use of wetlands, streams and lakes, particularly for water power. The New Hampshire Method evaluates the wetlands for the functional value by noting remnants of historic uses, including remains of structures, foundations, walls, dams, sluiceways, or even dumps. This value is particularly appropriate in both of the subject communities were the study area was closely associated with several gristmills and sawmills. Please reference Exhibit 41 for a map illustrating the relative value of each prime wetland candidate for this function.

Appendix B

GOVE ENVIRONMENTAL SERVICES, INC.

Wetlands and Soil Mapping

PRIME WETLAND INVENTORY REPORT

Hampton and Hampton Falls, New Hampshire

Updated Version: March 2006

February 8, 2006

GES Project # 2005160

118 Portsmouth Ave Ste B201, Stratham, NH 03885-2487

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TECHNICAL ADDENDUM/AMENDMENT PACKAGE- MARCH 2006

INTRODUCTION

On February 8, 2006, Gove Environmental Services, Inc. submitted the Prime Wetland Inventory Report for the municipalities of Hampton and Hampton Falls, New Hampshire. Following that submission, the Rockingham County Conservation District and the town Conservation Commissions have requested clarification of several questions raised by the report. This technical addendum/amendment package in intended to address these questions and should be considered as a portion of the total final report submission.

DISCUSSION

Why were the Cove Complex and the Taylor River Headwaters Complex not included in the recommendations for Hampton Falls Prime Wetlands? - Recommendations for Prime Wetland Designation are based on Total Wetland Value Units (a numeric value system) for functions and values accrued using the New Hampshire Method for the Comparison of Non-Tidal Wetlands (NH Method). Much of the NH Method analysis was conducted using Geographic Information Systems (GIS) technology. The spatial analysis component of this software allows the user to make statistical determinations based on the numeric data associated with the spatial component of the analysis. The software runs a regression analysis and data is separated into three categories using Jenks Optimized Natural Breaks to determine interval divisions. Using this methodology results in break points at the following ranges: 365-447, 448-1368 and 1369-2658 total wetland value units. Both the Cove Complex and the Taylor River Headwaters Complex fall in the mid-tier. As noted in the initial report, Prime Wetland Designation was initially reserved for top-tier candidates. It should be noted that there is a strong direct correlation between wetland complex size and total wetland value units. GES feels that this may be a weakness in the state-mandated NH Methodology. With this in mind, as previously indicated, both Hampton and Hampton Falls should reserve the right to propose Prime Wetland designation for any of the candidate complexes, as all of the wetland systems, as grouped by the Conservation Commissions, are of high function and value when compared to average wetlands.

Why are there discrepancies between road names on the report maps? - Using Geographic Information Systems, roads are automatically labeled using data from the NH Department of Transportation. Some road names were misidentified by NHDOT in that data layer. A corrected set of overview maps is provided with this technical addendum/amendment package and may be utilized in the event of confusion associated with this situation.

Updated Conservation Lands - At the time the wetland inventory was conducted, the most current GIS Conservation Lands data layer was utilized. However, this data layer did not contain four new conservation parcels (three in Hampton Falls, one in Hampton). The Hampton Falls parcels are Map 5 Lot 14 - Applecrest Farm Orchards, Map 2 Lot 61 - Janvrin Woods, and Map 5 Lot 41 - Hurd Farm. The Hampton parcel is Map 137 Lots 2/2A – Hurd Farm. While these

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parcels are of significant conservation value, their updated status does not affect the relative ranking of wetland complexes in their vicinity.

Some of the rankings associated with several wetland areas seem too high or too low. Why is that? - The New Hampshire Method calls for different assessment areas, ranging from the entire wetland complex to just a small portion of the system, for different functions and values. An example would be the Visual/Aesthetic score associated with the Winkley Brook Complex located in the southwest portion of Hampton Falls. Although this complex is somewhat remote, the assessment area for this wetland value was focused on approximately 20 acres at the confluence of Winkley Brook and the Hampton Falls River, visible from Weare Road and Mill Lane. Despite the fact that much of the remainder of the complex is not visible to passersby on the road, the high quality of this Primary Viewing Location determines the score for the entire complex. This same situation occurs with other functions and values including Finfish Habitat, Educational Potential, Water-based Recreation, Shoreline Anchoring and Historical Site Potential.

The Town of Hampton has recently gathered additional information regarding educational opportunities, recreation and historic site potential for the Lamprey Pond Complex. Does this affect the rank of this wetland complex? - As noted above, the NH Method calls for different assessment areas for differing functions and values. It appears that rankings for both educational and recreational opportunities remain constant. However, upon review, it was noted that the initial historical site potential score should be amended based on this updated information. This would add between 25 and 50 wetland value units to this complex, bringing the total to approximately 662 WVU's. Jenks Optimized Natural Break statistical analysis created tiers at the following WVU levels: 284-296, 297-815, and 816-2658. An adjustment of the historical site potential score still places the Lamprey Pond Complex in the second tier of prime wetland candidates. However, as previously stated, prime wetlands are often designated by municipalities by using only a subset of NH Method functions and values or by using additional threshold conditions alone. With this in mind, the towns of Hampton and Hampton Falls should reserve the right to propose Prime Wetland designation for any of the candidate complexes, as all of the wetland systems, as grouped by the Conservation Commissions, are of high function and value when compared to average wetlands.

PRIME WETLAND INVENTORY REPORT
TOWN–WIDE WETLANDS INVENTORY PHASE II
HAMPTON AND HAMPTON FALLS, NH

INTRODUCTION

During the summer of 2005, the Hampton and Hampton Falls Conservation Commissions requested proposals from qualified consultants to complete an inventory of wetland boundaries within these communities. The purpose of the inventory was to identify individual wetland areas as well as wetland complexes that were potentially suitable for Prime Wetland designation. A functions and values assessment of each prime wetland candidate was conducted to determine the relative importance of each wetland complex both in the communities and when appropriate, regionally. Using geographic information system (GIS) data and digital orthophotos as base maps, the wetland boundaries were mapped and provided to each of the participating municipalities as a layer for their geographic data system.

Gove Environmental Services, Inc. (GES) was selected to complete the wetland inventory and analyses, which culminated in the preparation of this summary report. Mapping and analysis work were completed in the fall and winter of 2005-06.

The information presented in this report is intended to be used as a broad inventory and planning tool for the communities of Hampton and Hampton Falls, and not as a site-specific impact evaluation tool, nor as a detailed wetland delineation. For Federal and most State jurisdictional purposes, a formal delineation must be completed utilizing the standards of the U.S. Army Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, (January 1987).

The municipalities will be able to use the information presented in this report for many planning purposes and can also pursue special designation of those wetlands determined to be of the highest ecological value. In New Hampshire, wetlands can be designated as "prime wetlands" by a municipality in accordance with the requirements of RSA 482-A: 15 and Chapter Wt 700 of the New Hampshire Department of Environmental Services (DES) administrative rules. The municipality chooses to evaluate the wetlands within its boundaries. As was the case in this instance, the evaluation method typically used is the *Method for Comparative Evaluation of Nontidal Wetlands in New Hampshire*[1] "(NH Method)" or the *Method for the Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire*[2] "(Coastal Method)". Fieldwork and available mapping and/or aerial photos are used for the evaluation process.

[1] Ammann, A.P. and A. Lindley Stone. 1991. *Method for the Comparative Evaluation of Nontidal Wetlands in New Hampshire*. Concord, NH: New Hampshire Department of Environmental Services: NHDES-WRD-1991-3.
[2] Cook, R.A, A.J. Lindley Stone, and A.P. Ammann. 1993. *Method for the Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire*. Audubon Society of New Hampshire, Concord, NH. 77 pp. + Appendices.

After the initial evaluations were completed, GES and the Conservation Commissions from the municipalities evaluated the functions and values exhibited by those wetlands determined to be likely candidates for prime wetland designation. Criteria such as size, location and a preponderance of "Type A Hydric Soils" (very poorly drained) were used to develop a list of candidate wetlands.

This report represents Phase II of the town-wide wetlands inventory for Hampton and Hampton Falls. Phase I, limited to the Taylor River watershed, was completed in 2004. Map boundaries and functional assessment data from Phase I have been integrated into this analysis to create a comprehensive report covering the entirety of the municipalities. With the completion of this study, the most valuable wetlands in the communities will be evident and the municipalities will hold a public hearing before the residents of the community to vote on the designation. Once the municipalities approve the wetlands for designation as prime, the municipalities will provide the DES Wetlands Bureau with a copy of the study and tax maps with the designated prime wetlands identified. DES will then review the submission from the municipality to ensure that it is complete and in accordance with Wt 702.03. Once the submission is considered complete, DES will apply the rules and law that are applicable to any future projects that are in or adjacent to a prime wetland. All projects that are in or adjacent to a prime wetland are classified as "Major" projects and will require a field inspection by DES and a public hearing conducted by DES.[3]

As of January 2006, there are 22 communities in New Hampshire that have designated prime wetlands. They are:

Andover	Meredith
Barrington	Northwood
Bow	Nashua
Brookline	New London
Derry	Pelham
Enfield	Salem
Exeter	Sanbornton
Fremont	Sandwich
Gilford	Tamworth
Holderness	Weare
Hooksett	Wolfeboro

Several additional communities have completed inventories towards designating prime wetlands and are in various stages of completion with the remainder of the process. Additional information regarding prime wetlands in New Hampshire may be found by contacting the NH Department of Environmental Services Wetlands Bureau by phone at (603) 271-2147 or online.

[3] NH DES Wetlands Bureau Guidebook for Wetlands Permits. http://www.des.state.nh.us/wetlands/Guidebook/primewet.htm

WETLAND INVENTORY METHODOLOGY

GES mapped all wetlands on the basis of hydrophytic vegetation, hydric soils, and wetlands hydrology in accordance with the techniques outlined in the Corps of Engineers Wetlands Delineation Manual, Technical report Y-87-1[4]. However, the complete and accurate jurisdictional wetland limits were not delineated or marked in the field using survey flagging. Wetland boundaries were determined by using a combination of tools, primarily infrared orthophotos and NRCS soils maps, and were verified by a cursory field check. These boundaries are generally not adequate for NHDES or US Army Corps regulatory permitting requirements. Wetland data plots and transects were not completed for this study. This study is intended to provide an inventory and evaluation of the wetland systems within the town limits and to assist the municipalities with their ongoing planning efforts.

Because of the scale of the study, GIS provides an ideal means of managing, interpreting and representing data about each mapped wetland. In order to integrate the wetlands into a geographic information system, it was necessary to create the data in a GIS compatible format. To this end, wetland boundaries were identified and traced onto high-resolution infrared digital aerial orthophotos. The wetland boundaries were then digitized into Geographic Information Systems format by GES and each wetland was assigned a unique identification number. More information about this process is provided in the following section of this report.

GES also determined the classifications of the wetlands in accordance with the Classification of Wetlands and Deepwater Habitats of the United States[5]. In most instances, classification types were determined through the integration of existing National Wetlands Inventory data. In some cases where an individual wetland is made up of different wetland classes, an estimate of each cover type was made based on the percent of each wetland type. These wetland classifications have also been entered into the GIS data layer.

During the course of the study, over 2000 wetland areas (many forming larger complexes) were identified representing a total of approximately 6400 acres within Hampton and Hampton Falls.

GES also gathered information relative to the ecological condition of the wetlands and wetland complexes. A brief description of each wetland was prepared and used in developing the NH Method Wetland Evaluations found in the appendices to this document.

Sensitive Wildlife Species and Plant Species and Communities

GIS point data was provided by the NH Department of Resources and Economic Development's (DRED) NH Natural Heritage Inventory Program (NH NHI). In all, 65 occurrences of rare, threatened or endangered species or natural communities occur within the subject communities. The data identified general locations of 44 sensitive plant species and seven sensitive plant

[4] Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station: NTIS No. AD A176 912.
[5] Cowardin, L.M., 1979. *Classification of Wetlands and Deepwater Habitats in the United States*. Washington, D.C.: U.S. Department of the Interior, Fish and Wildlife Service.

communities within the study area. Additionally, six sensitive insect species, one sensitive fish species and seven sensitive bird species occur within the study area. These species ranged in State Conservation Rankings from "Critically Imperiled" to "Rare or Uncommon." To protect the well being of these plants and animals, the exact species type was not readily available. This data was overlaid on the mapped wetlands to help identify wetlands that may include or be located within close proximity to sensitive resources. [(603) 271-3623] The Natural Heritage Inventory Program provides additional information related to this data.

Wetland Complex Identification System

Wetland complexes for prime wetland analysis were formed through the grouping of hydrologically connected wetlands. Complexes were assembled to insure that the requirement of 50% or greater very poorly drained soils was met. Wetland complexes were named using prominent features on USGS topographic quadrangles or local cultural features.

Wetland Mapping Process

Below is an itemized list of the methodology employed during both the field and GIS portions of the Hampton and Hampton Falls Wetland Inventory. Mapping began in the summer of 2004 and continued as necessary to verify initial results. GIS analysis began during the fall of 2004 and was continually modified until the conclusion of the finished product.

<u>Field Work Analysis</u>

1. The Rockingham Planning Commission provided digital color infrared orthophotographs. The maps were printed at 1:200 scale with tic marks printed on the maps for further reference.

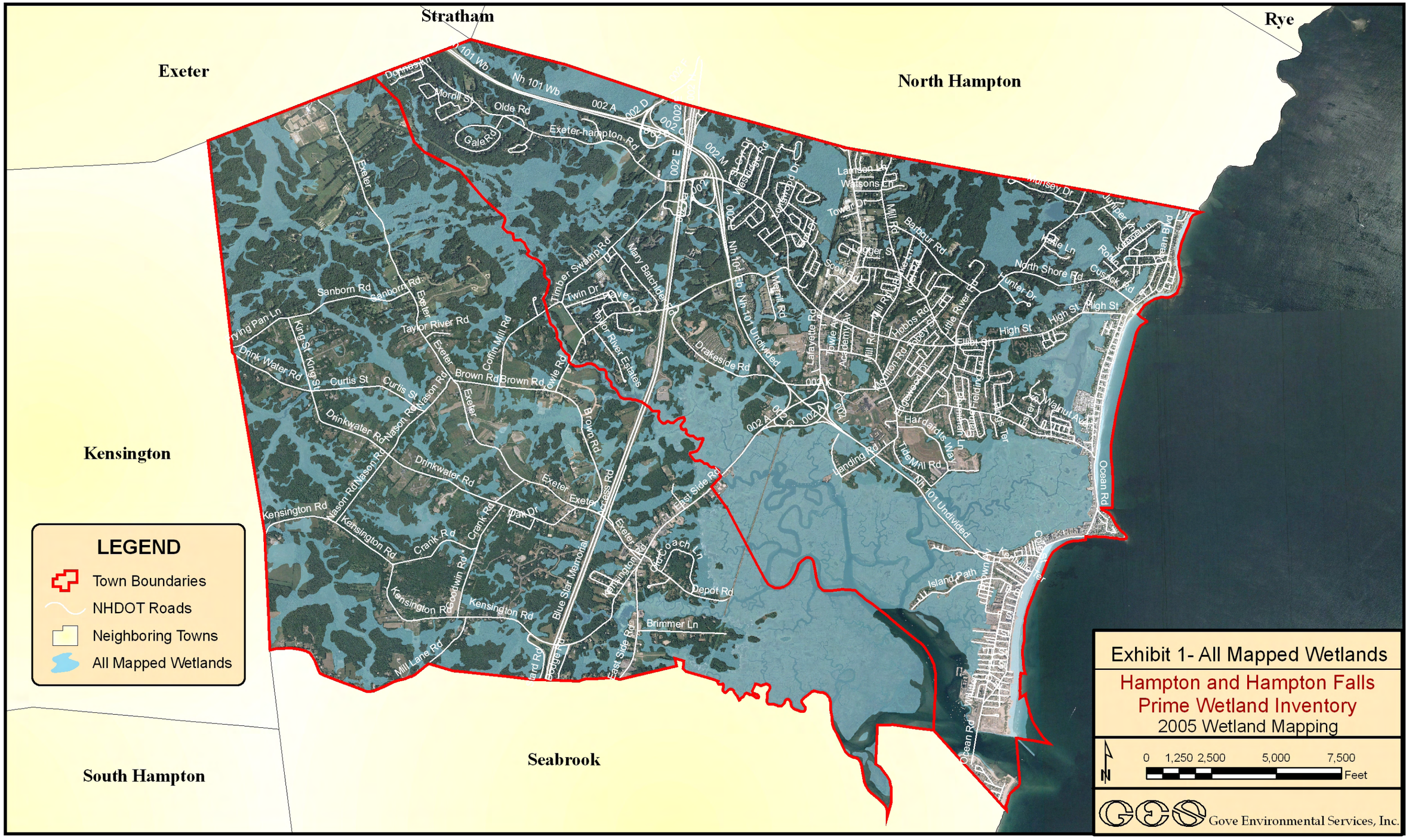
2. Wetlands were identified visually by soil, vegetation and infrared signature. Wetland lines were drawn on the maps using plane table mapping techniques and photo interpretation. A generalized Cowardin Classification was noted on the maps.

3. Wetland information from the National Wetlands Inventory and soil information from the Natural Resources Conservation Service were used to supplement photo interpretation in areas that were not visually distinctive.

4. Delineated wetland boundaries and tic marks were transferred to sheets of transparent mylar using a light table hand tracing.

Geographic Information Systems (GIS) Analysis

5. The mylar sheets were electronically scanned into digital format (.tif). The resulting image files were converted to GIS format using a batch digitizing program and the individual tiles were merged into one layer covering the entire study area.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Hampton and Hampton Falls
Prime Wetland Inventory
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6. When necessary, additional field observations were made to determine wetland boundaries still in question.

7. The Wetland Inventory GIS file was edited to reflect the additional information collected.

8. The resulting GIS file was used in conjunction with additional GIS data provided by the University of New Hampshire's Complex System Research Center (GRANIT) to complete the New Hampshire Method Comparative Analysis. Following summation of NH Method data sheets, a relative ranking system was produced.

PRIME WETLAND CANDIDATE EVALUATION

Methodology

Several evaluations and/or rankings must be completed in order to nominate high-value wetlands for additional regulatory protection in New Hampshire, including designation as prime wetlands. The necessary steps to classify wetlands as prime wetlands are identified as; (1) wetlands must be greater than 2.0 acres in size, (2) wetlands must have 50% or greater Type A (very poorly drained) hydric soils, and (3) the municipality may set threshold conditions. Wetlands meeting these criteria are then ranked for each of the functional values detailed below.

For the purposes of this study, no threshold conditions were set. As a result, candidates for prime wetland designation were selected based on the following criteria:

a. The wetlands met the standard regulatory definition of wetlands, i.e. they have the presence of hydric soils, hydrophytic vegetation, and wetlands hydrology.

b. At least 50% of the candidate wetland has Type A Hydric Soils, and the remaining soils are Type B Hydric Soils.

Using these criteria, 20 candidate wetland complexes were selected for evaluation and consideration for prime wetland designation. Of the 20 selected complexes, eleven are located in Hampton Falls and nine are located in Hampton.

These wetland complexes were evaluated using the *Method for Comparative Evaluation of Nontidal Wetlands in New Hampshire* (1991), (NH Method). For this study, all fourteen wetland functions and values outlined in the NH Method were evaluated for the 20 candidate wetland complexes. They are:

1. Ecological Integrity–Evaluates the overall health and function of the wetland ecosystem.
2. Wetland Wildlife Habitat–Evaluates the suitability of the wetland as habitat for those animals typically associated with wetlands and wetland edges.
3. Finfish Habitat–Evaluates the suitability of watercourses, ponds, or lakes associated with the wetland for either warm water or cold water fish.
4. Education Potential–Evaluates the suitability of the wetland as a site for an "outdoor classroom".
5. Visual/Aesthetic Quality–Evaluates the visual and aesthetic quality of the wetland.
6. Water-Based Recreation–Evaluates the suitability of the wetland and associated watercourses for non-powered boating, fishing, and other similar recreational activities.
7. Flood Control Potential–Evaluates the effectiveness of the wetland in storing floodwaters and reducing downstream flood peaks.
8. Groundwater Use Potential–Evaluates the potential use of the underlying aquifer as a drinking water supply.

9. Sediment Trapping–Evaluates the potential of the wetland to trap sediment in runoff water from surrounding upland.
10. Nutrient Attenuation–Evaluates the potential of the wetland to reduce the impacts of excess nutrients in runoff water on downstream lakes and streams.
11. Shoreline Anchoring and Dissipation of Erosive Forces–Evaluates the effectiveness of the wetland in preventing shoreline erosion.
12. Urban Quality of Life–Evaluates the potential for the wetland to enhance the quality of urban life by providing wildlife habitat and other natural values in an urban setting.
13. Historical Site Potential–Evaluates for indications of use by early settlers.
14. Noteworthiness–Evaluates the wetland for certain special values such as critical habitat for endangered species, or exemplary natural communities, etc.

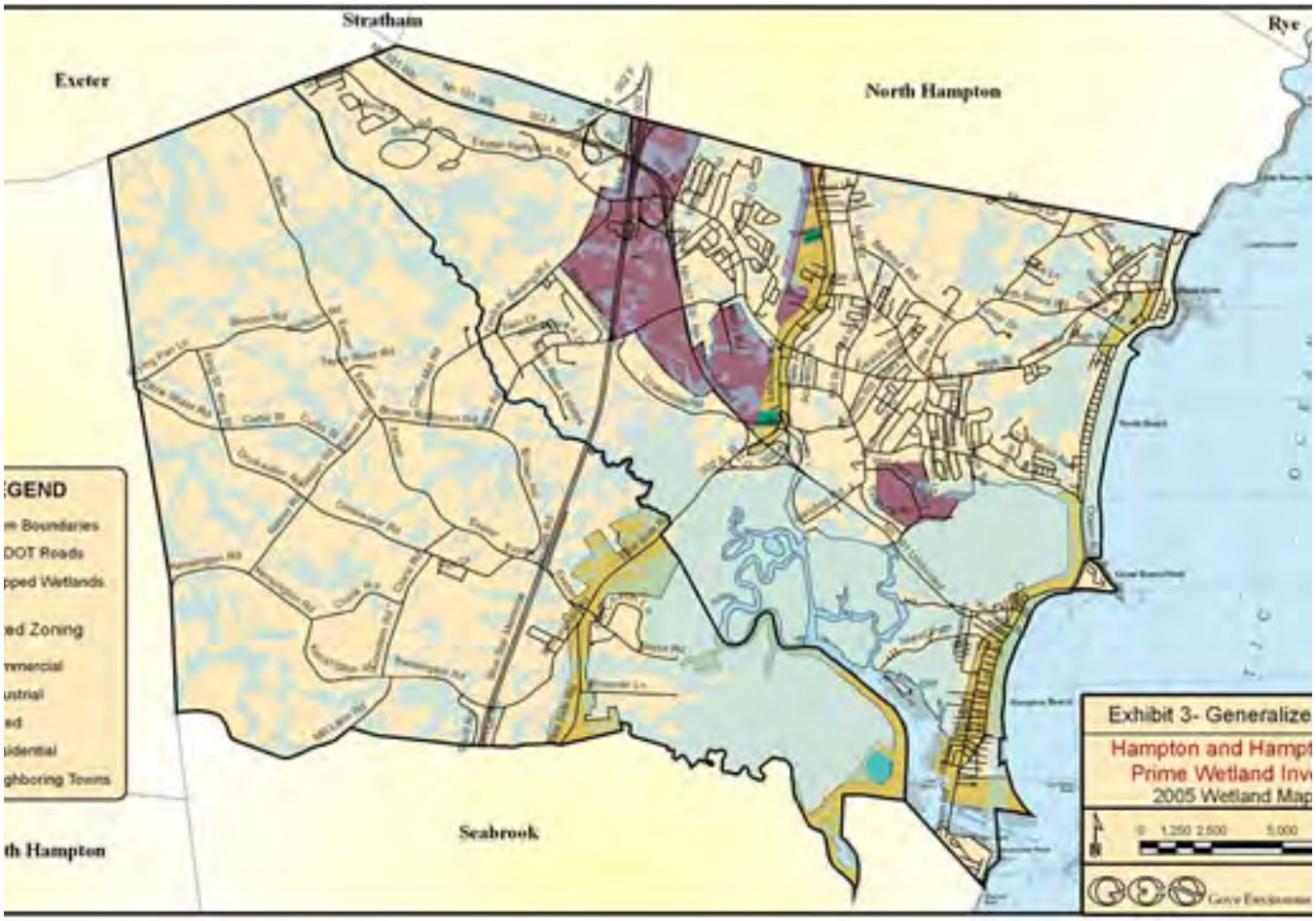
Findings

The Phase I study area was restricted to the primary watershed of the Taylor River (as designated by the Conservation Commissions). As a result, it is important to note that while Phase I Prime Wetland Candidates all ranked very high in all function and value categories, the small study area created a number of situations that should be taken in to consideration:

1. The study area truncated large wetland complexes at arbitrary points. The majority of the wetlands analyzed in Phase I extend well beyond the limit of the Phase I study area.
2. The restricted area of the study limited the size of the Prime Candidate set and made comparison of relative value difficult.

As a result, the Hampton and Hampton Falls Conservation Commissions made the decision to delay proposing prime wetland designation until a more comprehensive study could be conducted. With the completion of the Phase II study, detailed in this report, it is now possible to assess all wetland complexes within the subject towns as a whole. Because of this, Prime Wetland Candidates proposed in Phase I have been amended to take the addition of adjacent wetland areas into consideration. An overview of the study area as well as detailed views and description of each potential Prime Wetland Candidate are provided in the following pages.

EXHIBITS 1-7: STUDY AREA OVERVIEWS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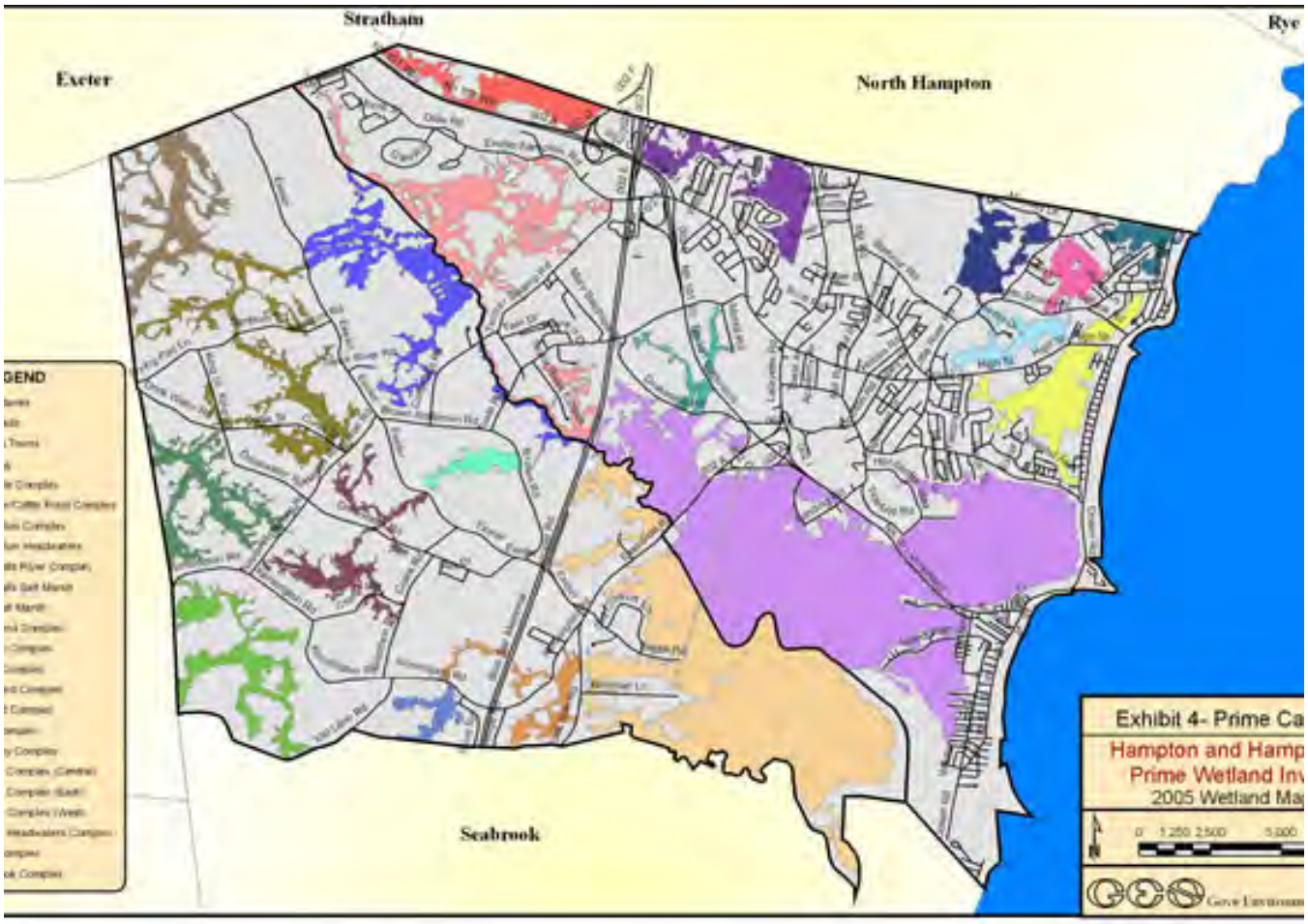
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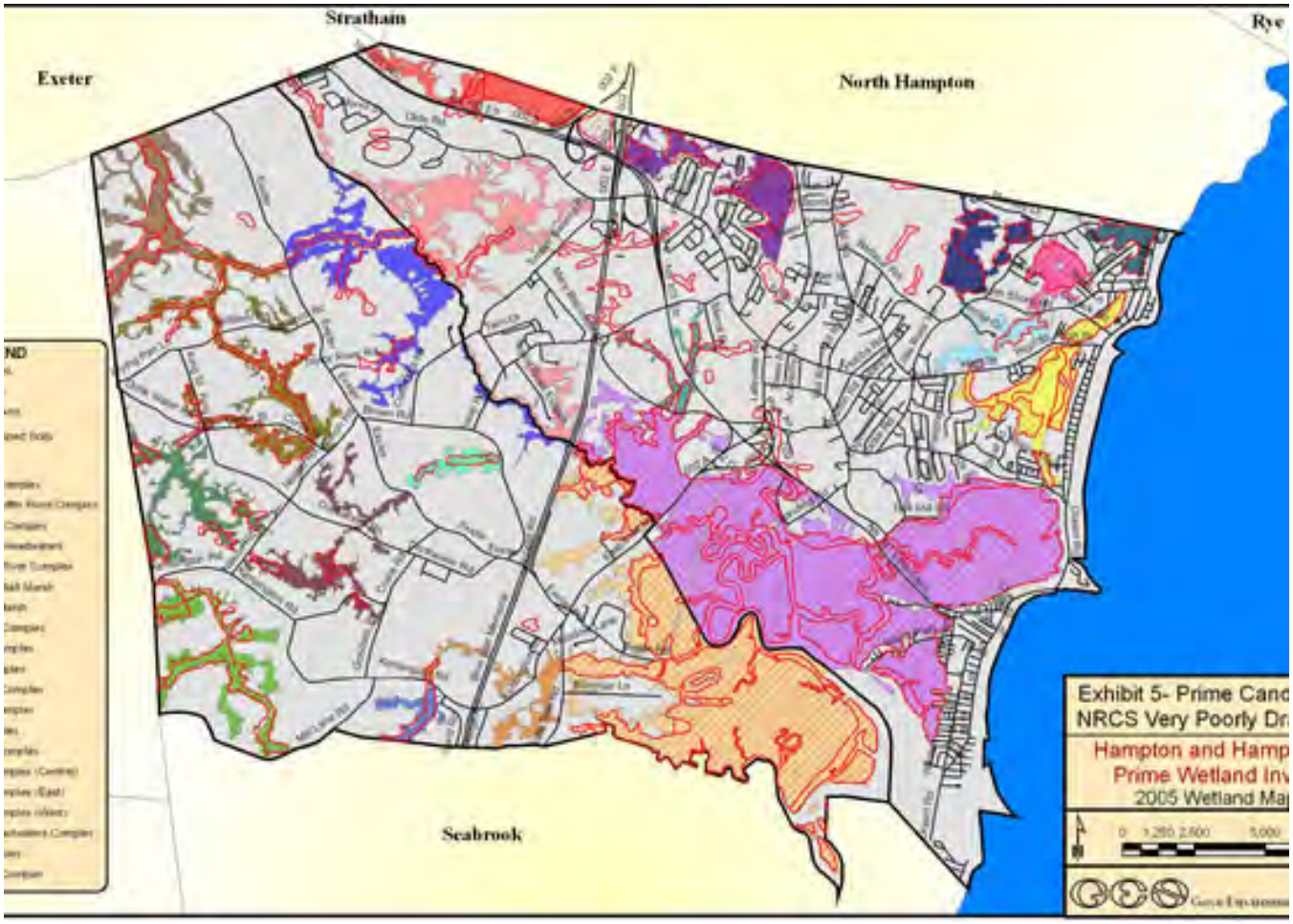
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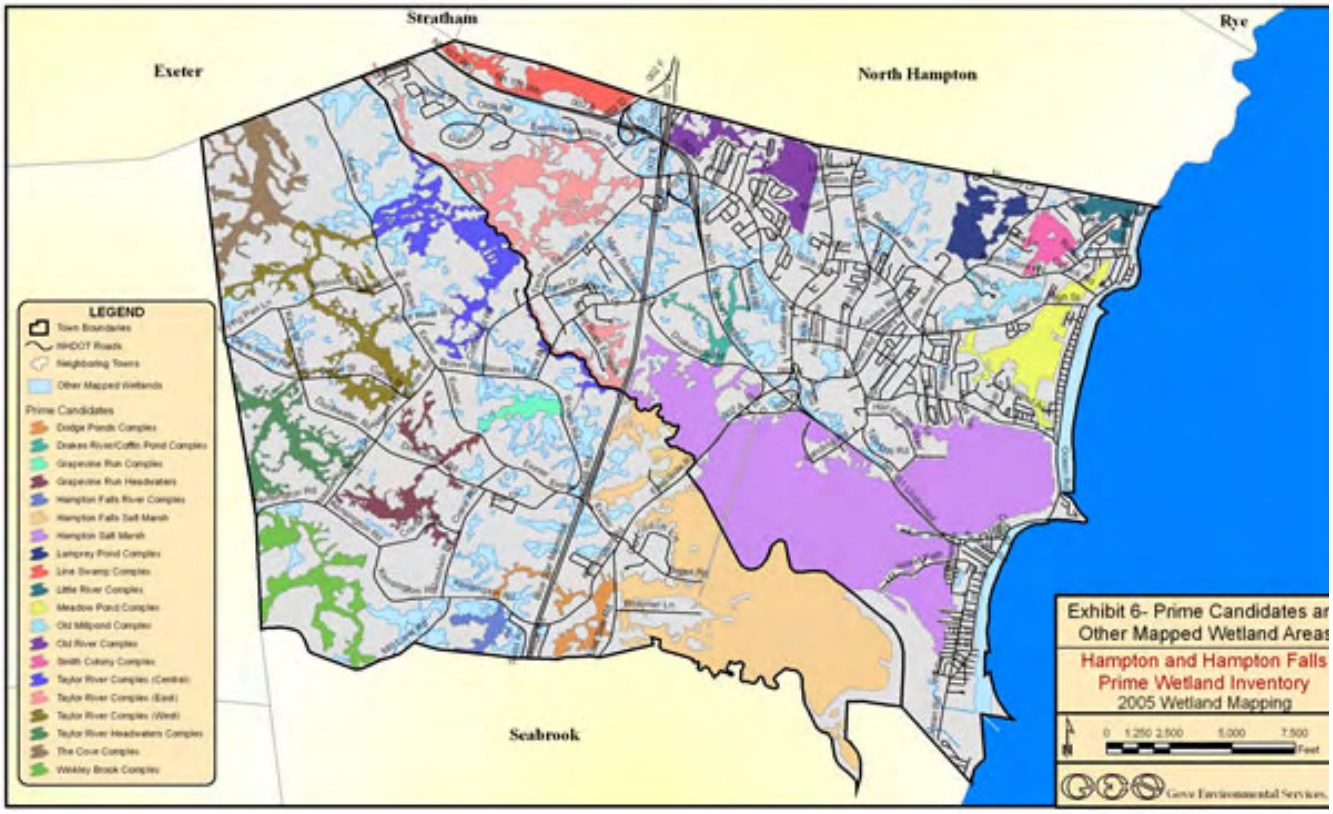
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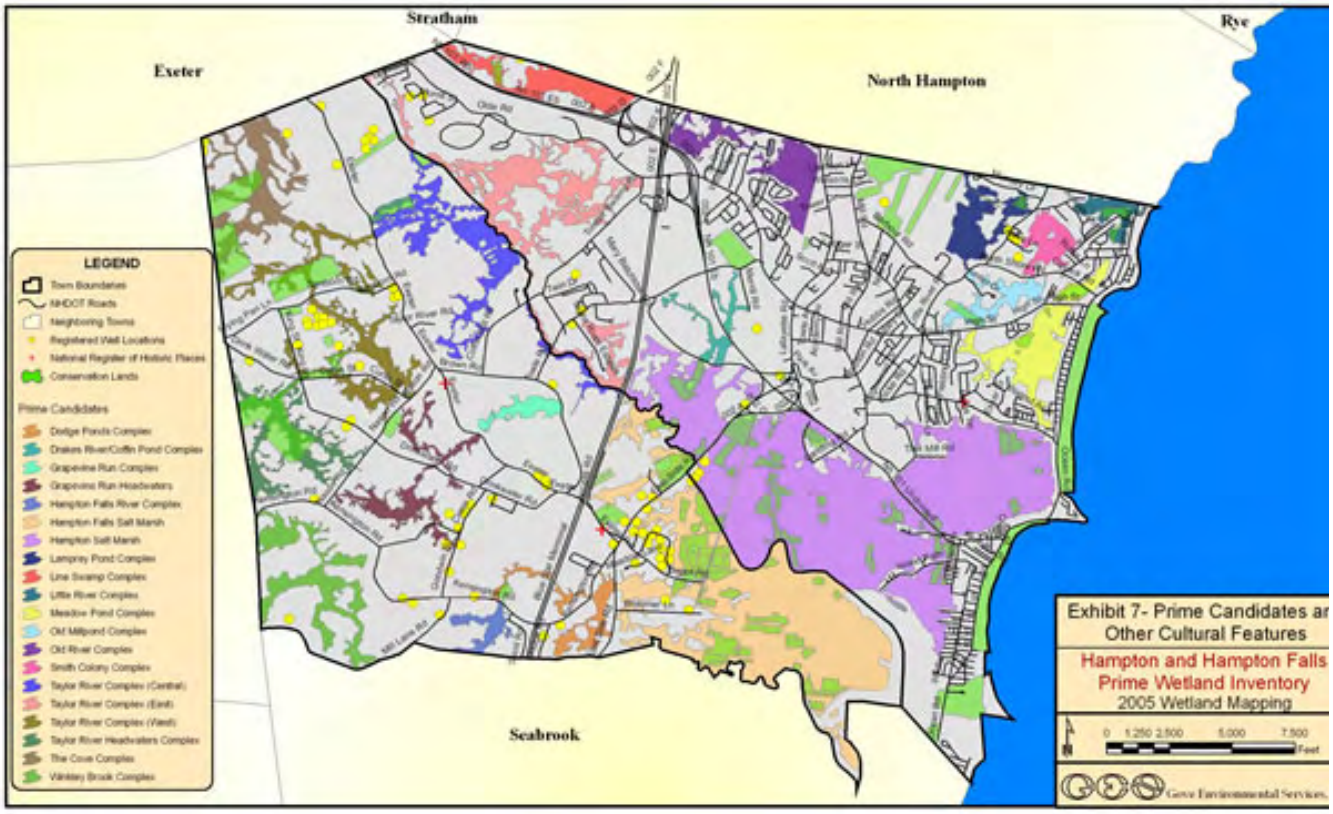
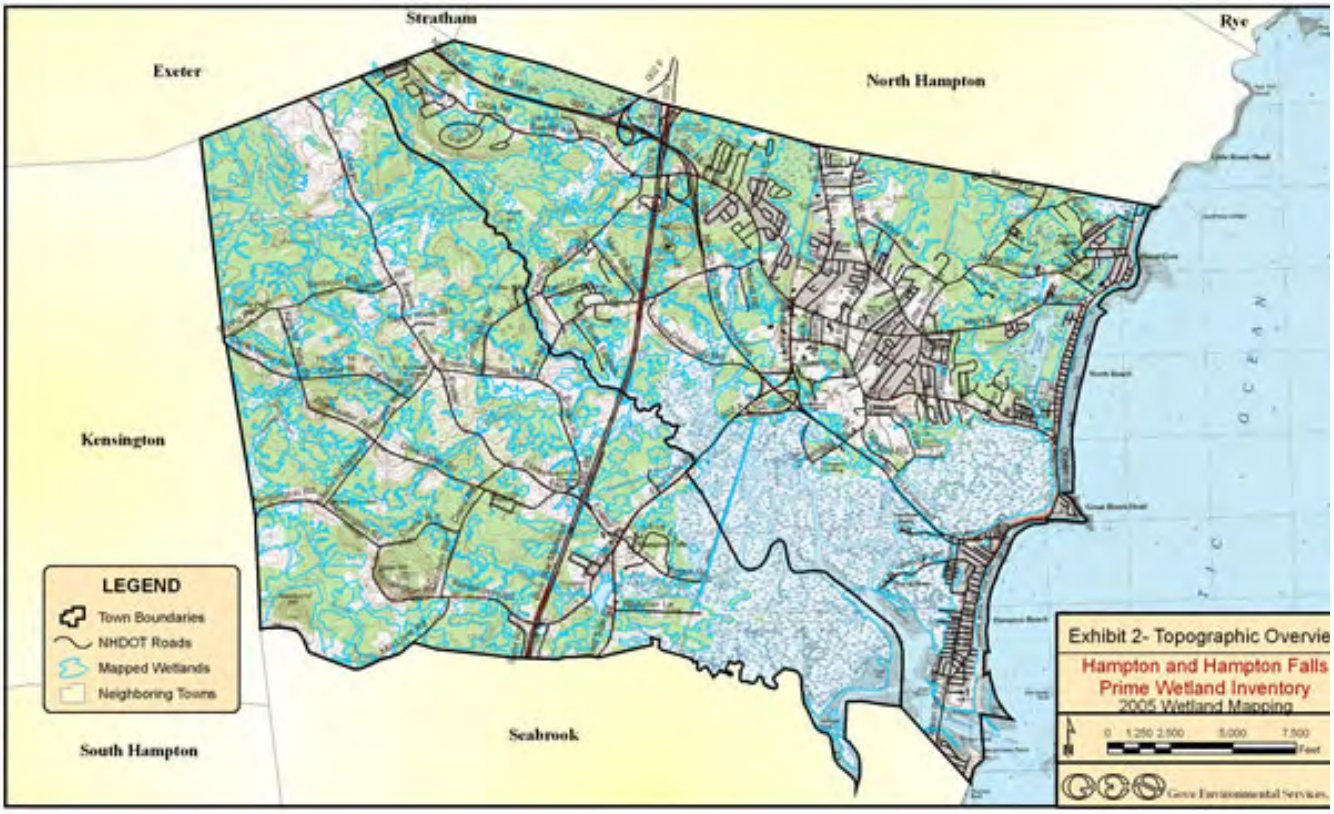
Town Boundaries
NHDOT Roads
Neighboring Towns
Other Mapped Wetlands
Prime Candidates
Dodge Ponds Complex
Drakes River/Coffin Pond Complex
Grapevine Run Complex
Grapevine Run Headwaters
Hampton Falls River Complex
Hampton Falls Salt Marsh
Hampton Salt Marsh
Lamprey Pond Complex
Line Swamp Complex
Little River Complex
Meadow Pond Complex
Old Millpond Complex
Old River Complex
Smith Colony Complex
Taylor River Complex (Central)
Taylor River Complex (East)
Taylor River Complex (West)
Taylor River Headwaters Complex
The Cove Complex
Winkley Brook Complex
Exhibit 6- Prime Candidates ar
Other Mapped Wetland Areas
Hampton and Hampton Falls
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500
Feet
Gove Environmental Services

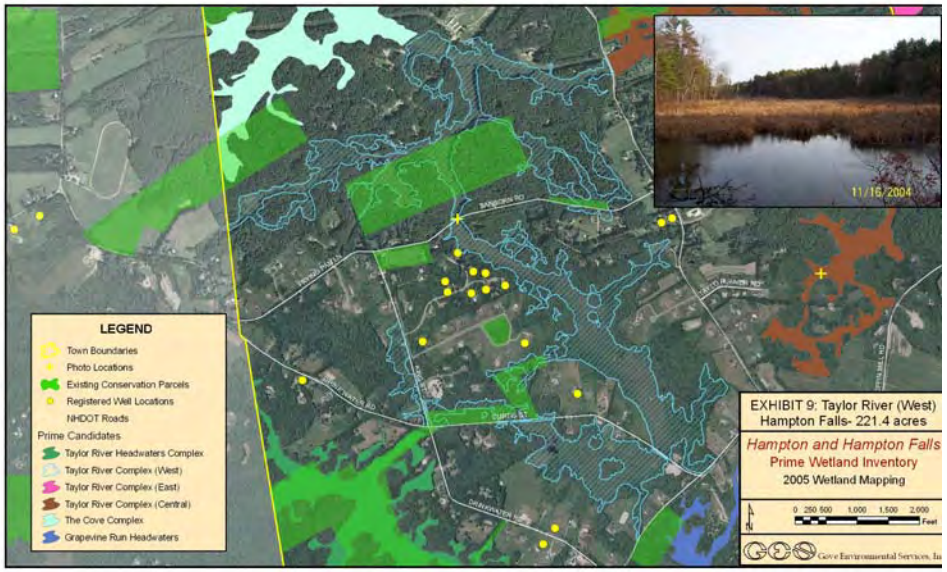

Stratham
Rye
Exeter
North Hampton
Seabrook
LEGEND
Town Boundaries
NHDOT Roads
Neighboring Towns
Registered Well Locations
National Register of Historic Places
Conservation Lands
Prime Candidates
Dodge Ponds Complex
Drakes River/Coffin Pond Complex
Grapevine Run Complex
Grapevine Run Headwaters
Hampton Falls River Complex
Hampton Falls Salt Marsh
Hampton Salt Marsh
Lamprey Pond Complex
Line Swamp Complex
Little River Complex
Meadow Pond Complex
Old Millpond Complex
Old River Complex
Smith Colony Complex
Taylor River Complex (Central)
Taylor River Complex (East)
Taylor River Complex (West)
Taylor River Headwaters Complex
The Cove Complex
Winkley Brook Complex
Exhibit 7- Prime Candidates ar
Other Cultural Features
Hampton and Hampton Falls
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500
Feet
Gove Environmental Services

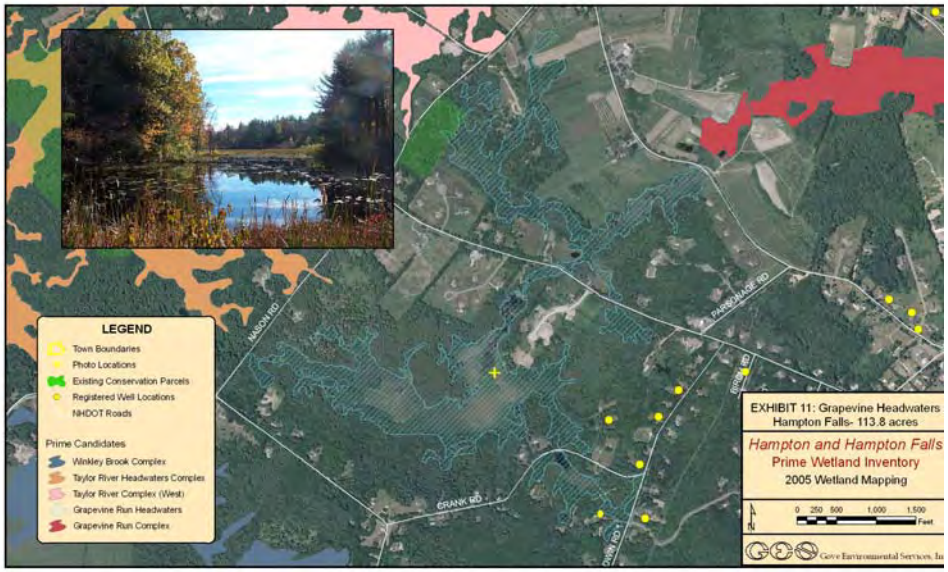

Stratham
Rye
Exeter
North Hampton
Kensington
Seabrook
South Hampton
OCEAN
LEGEND
Town Boundaries
NHDOT Roads
Mapped Wetlands
Neighboring Towns
Exhibit 2- Topographic Overvie
Hampton and Hampton Falls
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500
Feet
Gove Environmental Services

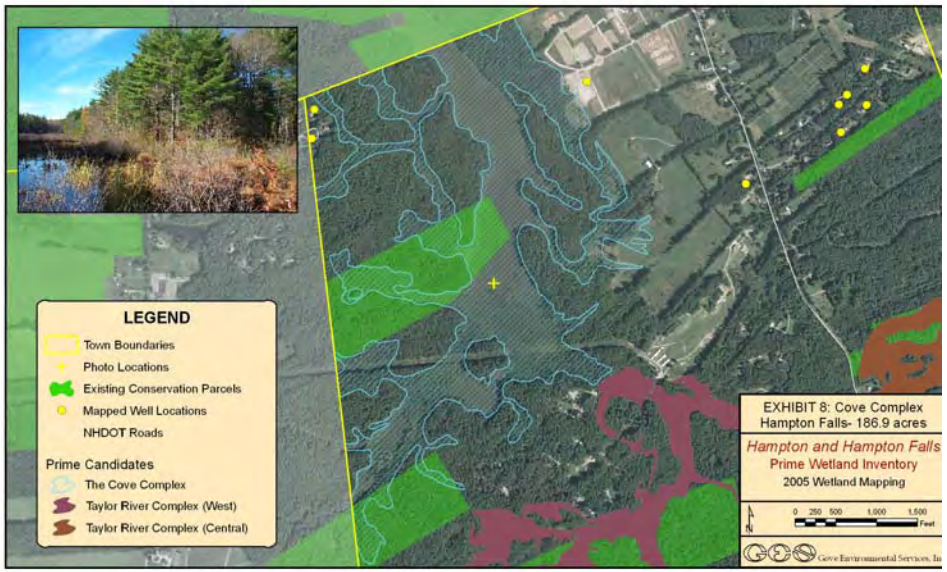
DESCRIPTION OF PRIME WETLAND CANDIDATES

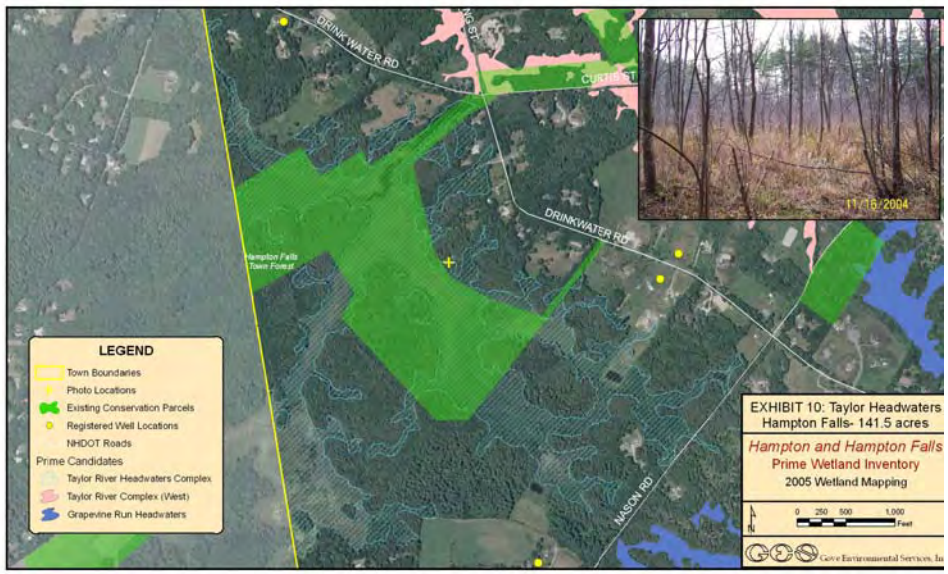
The following pages contain maps based on 2003 color aerial photographs of the 20 prime wetland candidates assessed during the course of this study. In addition to showing the boundary of each prime wetland candidate, the maps also depict the location of existing conservation parcels, NHDOT maintained roads, registered drinking water well locations, neighboring prime wetland candidates and, where applicable, photographs of the wetland complex taken by the Rockingham Planning Commission. For the convenience of the municipalities, the following exhibits are separated by town. Exhibits 8 through 17 cover Prime Candidates located in Hampton Falls. Exhibits 18 through 27 cover Prime Candidates located in Hampton.

EXHIBITS 8–27
HAMPTON AND HAMPTON FALLS PRIME WETLAND CANDIDATES

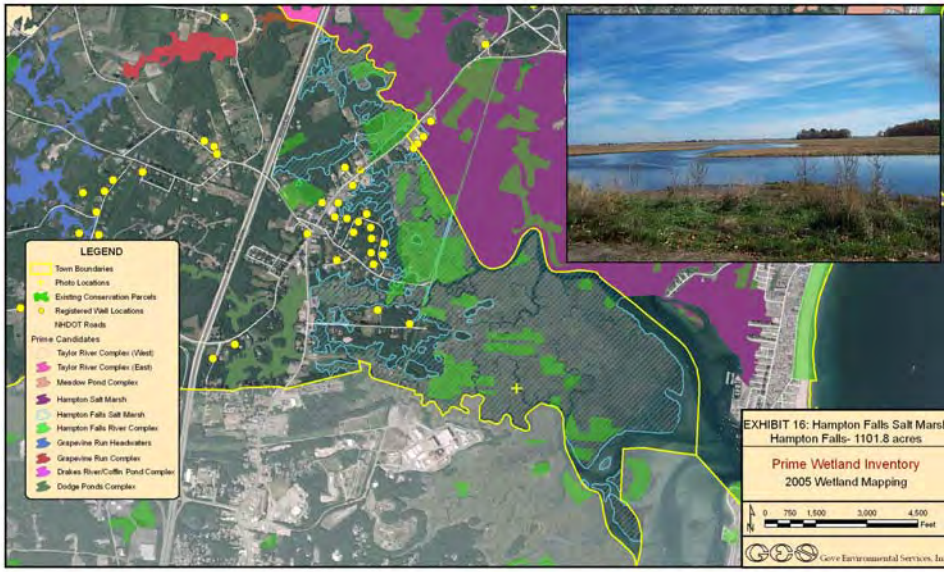

11/16/2004
LEGEND
Town Boundaries
Photo Locations
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Taylor River Headwaters Complex
Taylor River Complex (West)
Taylor River Complex (East)
Taylor River Complex (Central)
The Cove Complex
Grapevine Run Headwaters
EXHIBIT 9: Taylor River (West)
Hampton Falls- 221.4 acres
Hampton and Hampton Falls
Prime Wetland Inventory
2005 Wetland Mapping
0 250 500 1,000 1,500 2,000 Feet
Cove Environmental Services, Inc

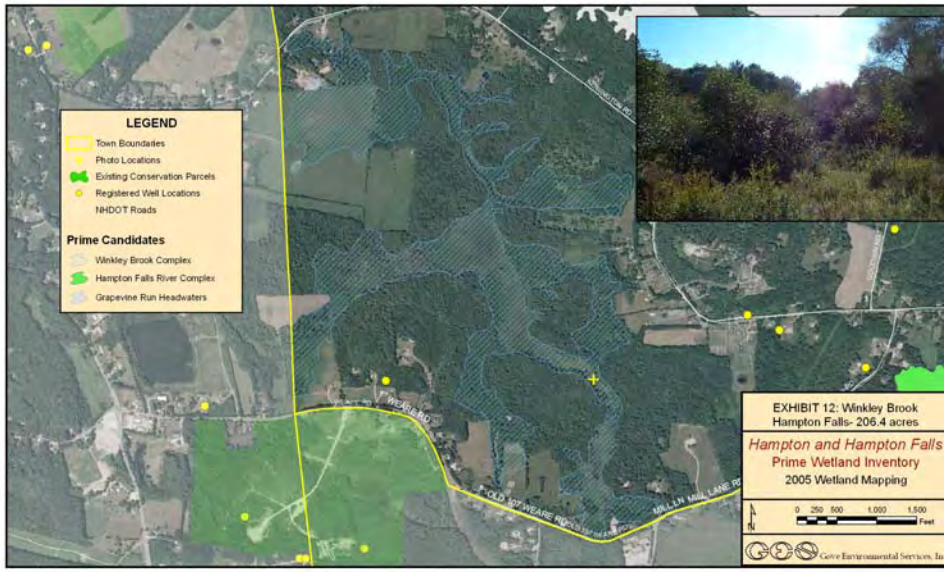

LEGEND
Town Boundaries
Photo Locations
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Winkley Brook Complex
Taylor River Headwaters Complex
Taylor River Complex (West)
Grapevine Run Headwaters
Grapevine Run Complex
NASON RD
PARKS RANGE RD
FRANK RD
EXHIBIT 11: Grapevine Headwaters
Hampton Falls- 113.8 acres
Hampton and Hampton Falls
Prime Wetland Inventory
2005 Wetland Mapping
0 250 500 1,000 1,500 Feet
Cove Environmental Services, Inc

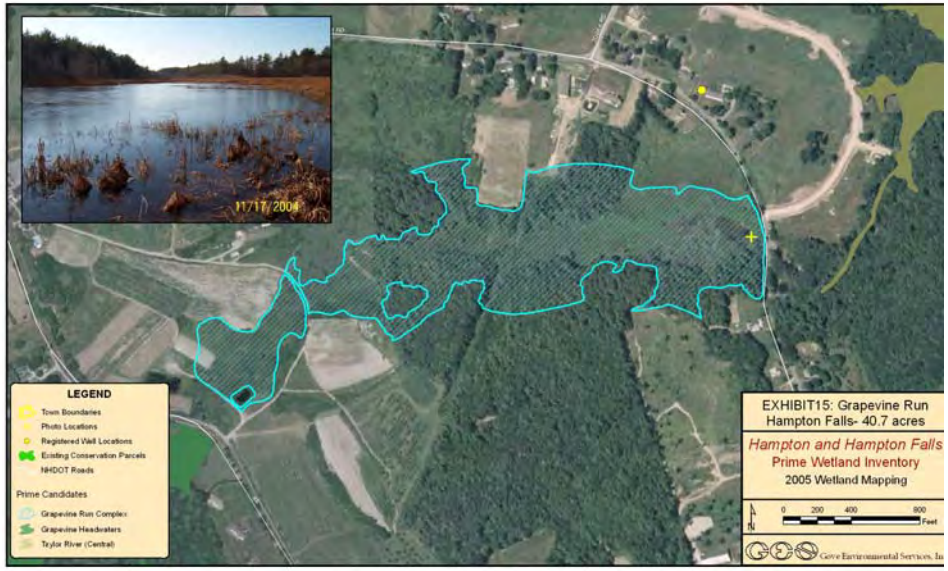

LEGEND
Town Boundaries
Photo Locations
Existing Conservation Parcels
Mapped Well Locations
NHDOT Roads
Prime Candidates
The Cove Complex
Taylor River Complex (West)
Taylor River Complex (Central)
EXHIBIT 8: Cove Complex
Hampton Falls- 186.9 acres
Hampton and Hampton Falls
Prime Wetland Inventory
2005 Wetland Mapping
0 250 500 1,000 1,500 Feet
Cove Environmental Services, Inc

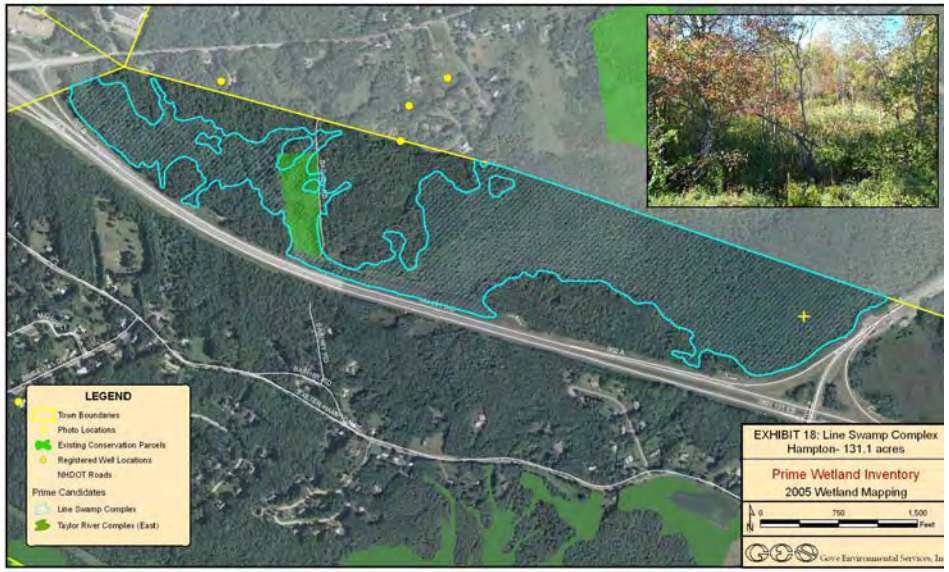

DRINKWATER RD
DRINKWATER RD
NASON RD
11/16/2004
LEGEND
Town Boundaries
Photo Locations
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Taylor River Headwaters Complex
Taylor River Complex (West)
Grapevine Run Headwaters
EXHIBIT 10: Taylor Headwaters
Hampton Falls- 141.5 acres
Hampton and Hampton Falls
Prime Wetland Inventory
2005 Wetland Mapping
0 250 500 1,000 Feet
Cove Environmental Services, Inc

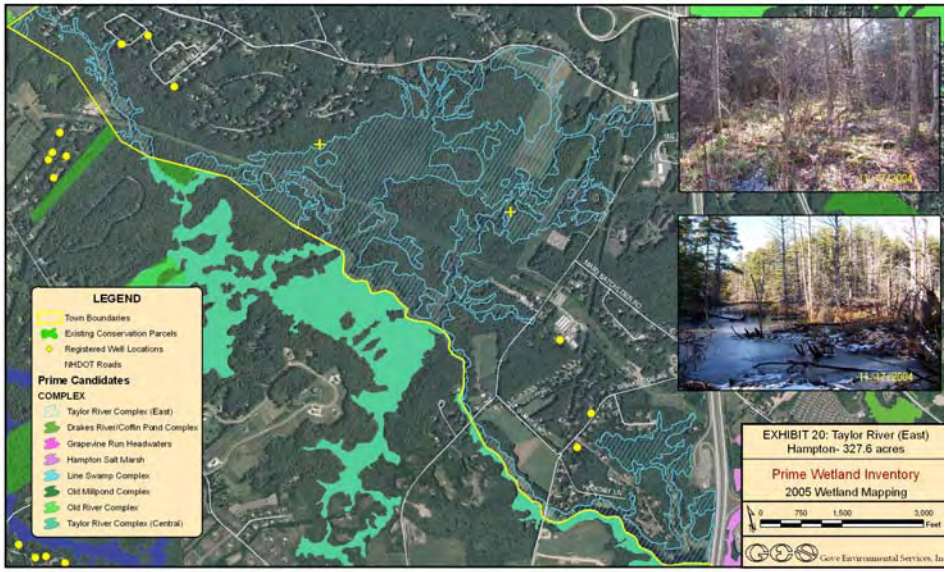

LEGEND
Town Boundaries
Photo Locations
Registered Well Locations
Existing Conservation Parcels
NHDOT Roads
Prime Candidates
Dodge Ponds Complex
Hampton Falls River Complex
Hampton Falls Salt Marsh
No Photo Available
EXHIBIT14: Dodge Ponds Complex
Hampton Falls- 73.5 acres
Hampton and Hampton Falls
Prime Wetland Inventory
2005 Wetland Mapping
0 250 500 1,000 Feet
Gove Environmental Services, Inc.

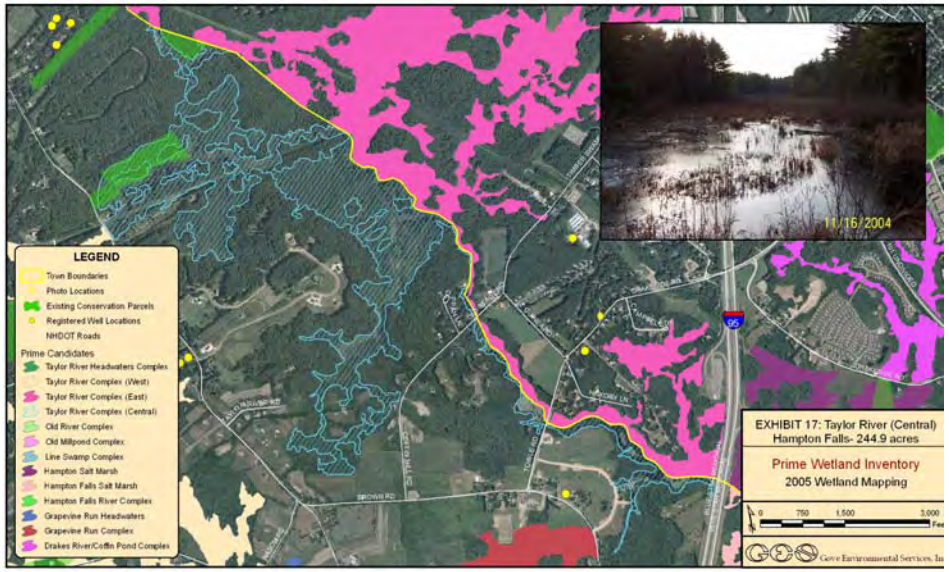

LEGEND
Town Boundaries
Photo Locations
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Taylor River Complex (West)
Taylor River Complex (East)
Meadow Pond Complex
Hampton Salt Marsh
Hampton Falls Salt Marsh
Hampton Falls River Complex
Grapevine Run Headwaters
Grapevine Run Complex
Drakes River/Coffin Pond Complex
Dodge Ponds Complex
EXHIBIT 16: Hampton Falls Salt Marsh
Hampton Falls- 1101.8 acres
Prime Wetland Inventory
2005 Wetland Mapping
0 750 1,500 3,000 4,500 Feet
Gove Environmental Services, Inc.


LEGEND
Town Boundaries
Photo Locations
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Winkley Brook Complex
Hampton Falls River Complex
Grapevine Run Headwaters
EXHIBIT 12: Winkley Brook
Hampton Falls- 206.4 acres
Hampton and Hampton Falls
Prime Wetland Inventory
2005 Wetland Mapping
0 250 500 1,000 1,500 Feet
Gove Environmental Services, Inc.


11/17/2004
LEGEND
Town Boundaries
Photo Locations
Registered Well Locations
Existing Conservation Parcels
NHDOT Roads
Prime Candidates
Grapevine Run Complex
Grapevine Headwaters
Taylor River (Central)
EXHIBIT15: Grapevine Run
Hampton Falls- 40.7 acres
Hampton and Hampton Falls
Prime Wetland Inventory
2005 Wetland Mapping
0 200 400 800 Feet
Gove Environmental Services, Inc.

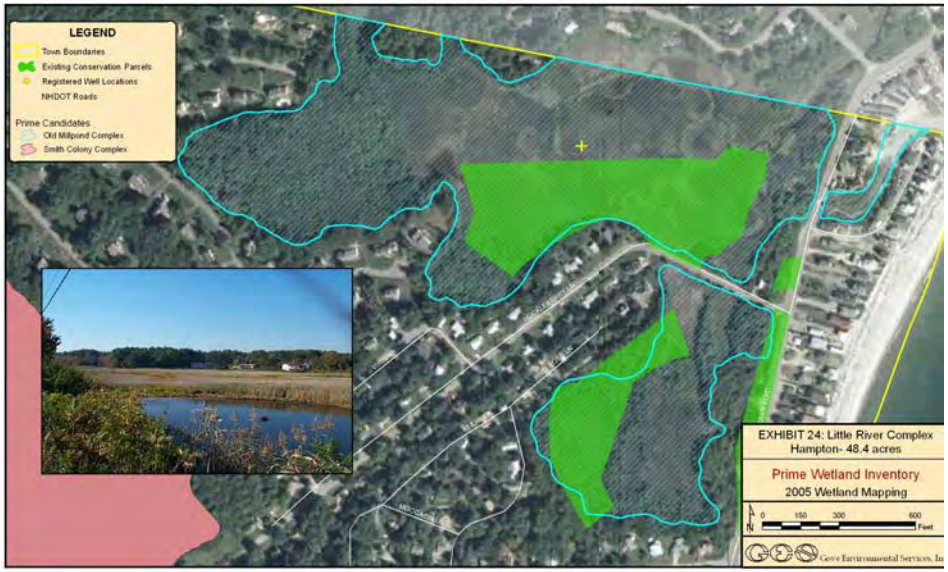

LEGEND
Town Boundaries
Photo Locations
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Line Swamp Complex
Taylor River Complex (East)
EXHIBIT 18: Line Swamp Complex
Hampton- 131.1 acres
Prime Wetland Inventory
2005 Wetland Mapping
0 750 1,500 Feet
Gove Environmental Services, Inc.

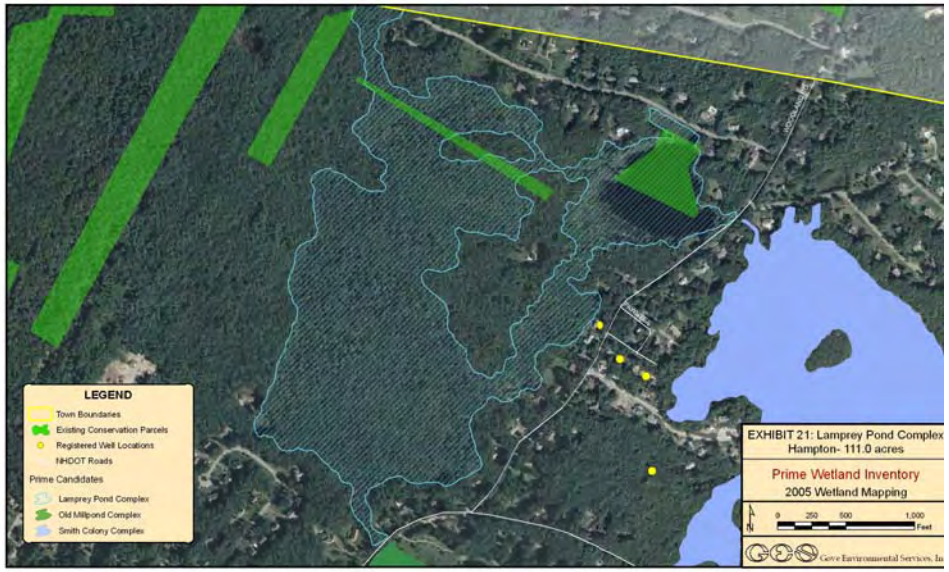

LEGEND
Town Boundaries
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
COMPLEX
Taylor River Complex (East)
Drakes River/Coffin Pond Complex
Grapevine Run Headwaters
Hampton Salt Marsh
Line Swamp Complex
Old Millpond Complex
Old River Complex
Taylor River Complex (Central)
EXHIBIT 20: Taylor River (East)
Hampton- 327.6 acres
Prime Wetland Inventory
2005 Wetland Mapping
0 750 1,500 3,000 Feet
Gove Environmental Services, Inc.

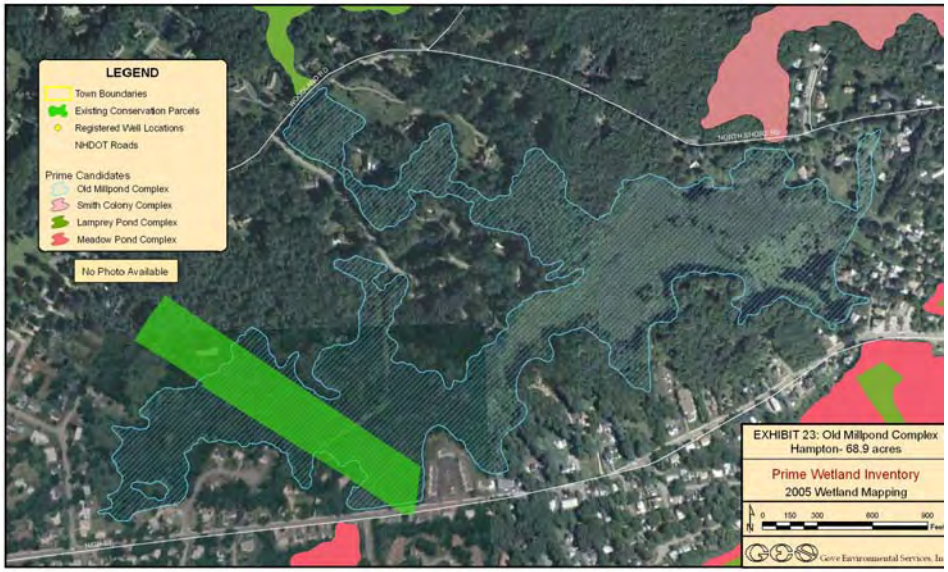

11/16/2004
LEGEND
Town Boundaries
Photo Locations
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Taylor River Headwaters Complex
Taylor River Complex (West)
Taylor River Complex (East)
Taylor River Complex (Central)
Old River Complex
Old Millpond Complex
Line Swamp Complex
Hampton Salt Marsh
Hampton Falls Salt Marsh
Hampton Falls River Complex
Grapevine Run Headwaters
Grapevine Run Complex
Drakes River/Coffin Pond Complex
EXHIBIT 17: Taylor River (Central)
Hampton Falls- 244.9 acres
Prime Wetland Inventory
2005 Wetland Mapping
0 750 1,500 3,000 Feet
Gove Environmental Services, Inc.


LEGEND
Town Boundaries
Photo Locations
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Old River Complex
EXHIBIT 19: Old River Complex
Hampton- 157.3 acres
Prime Wetland Inventory
2005 Wetland Mapping
0 750 1,500 Feet
Gove Environmental Services, Inc.


LEGEND
Town Boundaries
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Smith Colony Complex
Lamprey Pond Complex
Line Swamp Complex
Little River Complex
Meadow Pond Complex
Old Millpond Complex
EXHIBIT 22: Smith Colony Complex
Hampton- 65.9 acres
Prime Wetland Inventory
2005 Wetland Mapping
Feet
Gove Environmental Services, Inc.

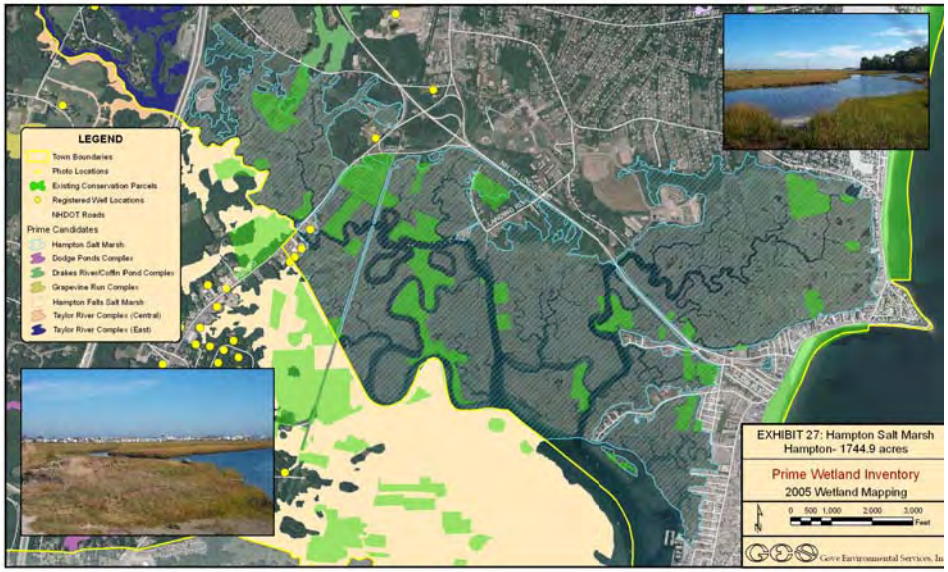

LEGEND
Town Boundaries
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Old Millpond Complex
Smith Colony Complex
EXHIBIT 24: Little River Complex
Hampton- 48.4 acres
Prime Wetland Inventory
2005 Wetland Mapping
Feet
Gove Environmental Services, Inc.


LEGEND
Town Boundaries
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Lamprey Pond Complex
Old Millpond Complex
Smith Colony Complex
EXHIBIT 21: Lamprey Pond Complex
Hampton- 111.0 acres
Prime Wetland Inventory
2005 Wetland Mapping
Feet
Gove Environmental Services, Inc.


LEGEND
Town Boundaries
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Old Millpond Complex
Smith Colony Complex
Lamprey Pond Complex
Meadow Pond Complex
No Photo Available
EXHIBIT 23: Old Millpond Complex
Hampton- 68.9 acres
Prime Wetland Inventory
2005 Wetland Mapping
Feet
Gove Environmental Services, Inc.


LEGEND
Town Boundaries
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Meadow Pond Complex
Old Millpond Complex
Hampton Salt Marsh
EXHIBIT 26: Meadow Pond Complex
Hampton- 187.4 acres
Prime Wetland Inventory
2005 Wetland Mapping
0 250 500 1,000
Feet
Gove Environmental Services, Inc.


LEGEND
Town Boundaries
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Drakes River/Coffin Pond
Taylor River East
Hampton Salt Marsh
EXHIBIT 25: Drakes River/Coffin Pond
Hampton- 45.2 acres
Prime Wetland Inventory
2005 Wetland Mapping
0 150 300 600 900 1,200
Feet
Gove Environmental Services, Inc.


LEGEND
Town Boundaries
Photo Locations
Existing Conservation Parcels
Registered Well Locations
NHDOT Roads
Prime Candidates
Hampton Salt Marsh
Dodge Ponds Complex
Drakes River/Coffin Pond Complex
Grapevine Run Complex
Hampton Falls Salt Marsh
Taylor River Complex (Central)
Taylor River Complex (East)
EXHIBIT 27: Hampton Salt Marsh
Hampton- 1744.9 acres
Prime Wetland Inventory
2005 Wetland Mapping
0 500 1,000 2,000 3,000
Feet
Gove Environmental Services, Inc.

FUNCTIONS AND VALUES SUMMARY

This section of the report provides a summary of functions and values for each of the 16 prime wetland candidates that were assessed using the "NH Method" (the four tidal candidates were not assessed using the NH Method as they are considered to be *de facto* prime). A brief explanation of each function or value is provided and is followed by a GIS map illustrating the relative value of each prime wetland candidate for each function or value. Please note that some functions and values only occur in portions of each complex (i.e. finfish habitat occurs only in streams and ponds). As a result, area evaluated for each function or value is less than the total acreage of the complex in some instances. Finally, "Wetland Value Units" may be interpreted as the product of wetland acreage multiplied by the "Functional Value Index" (the raw score of each wetlands' ability to provide a specific function or value).

Function/Value 1: Ecological Integrity

This wetland function is a measure of the high degree of productivity that is typical of many wetland systems. Runoff entering wetlands from the surrounding uplands generally contains dissolved nutrients, which are then slowly released and assimilated by the lush vegetation characteristic of most of these wetlands. Wetland vegetation, along with interspersion of upland edges and in some cases, surface waters, also contributes to a diverse animal community. All of these factors contribute to the ecological integrity of the wetland. Please reference Exhibit 29 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 2: Wetland Wildlife Habitat

It should be noted that the methodology used for this particular wetland identification and evaluation study (the New Hampshire Method) does not evaluate the wetlands as habitat for any particular wildlife species, but does attempt to assess the suitability of a particular wetland for wildlife species that are typically associated with wetlands. This functional value concentrates on those wildlife species that are most dependent on emergent (marsh) wetlands for habitat. This outcome of this functional assessment is heavily dependent on the outcome of the Ecological Integrity assessment. Please reference Exhibit 30 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 3: Finfish Habitat of Watercourses and/or Lakes Associated with the Wetland

This Functional Value is a measure of the ability of streams and brooks, or lakes and ponds to provide finfish habitat. Although this study focuses on the primary watershed of the Taylor River, it is important to note that the vast majority of wetlands surveyed are forested, scrub-shrub, shallow marsh or some variant that is not suitable for fish habitat. As a result, despite the large size of the study area, a relatively small percentage of wetlands surveyed actually provide finfish habitat. The value of the Taylor River and its tributaries to anadromous (sea-run) species such as alewife, herring, salmon and shad is also limited by the presence of obstructions such as dams (both natural and manmade) that prevent access to potential spawning areas. Please reference Exhibit 31 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 4: Educational Potential

A potential for use of wetlands as an educational tool is directly related to its proximity to a school and accessibility of the wetland. The potential area of a wetland that could provide educational opportunities may include all or some of the wetland. The diversity of the wetland and the variety of wetland types within the wetland system area also key factors. Please reference Exhibit 32 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 5: Visual/Aesthetic Quality

Although visual and aesthetic qualities can be subject to some interpretation, the New Hampshire Method attempts to quantify this element by considering a variety of factors. These include scenic diversity (several different plant communities), general appearance of the wetland and surrounding area, landform contrasts, flowering trees and shrubs, or trees and shrubs that turn vibrant colors in the fall, and wetland wildlife habitat. This Functional Value also considers intrusions such as noise from highways and unnatural odors. Please reference Exhibit 33 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 6: Water-Based Recreation

Recreational activities involving wetlands can include active uses such as hunting and fishing, but also more passive activities like bird watching, hiking or identifying the varied plant life. Boating activities, including canoeing and kayaking, can also be considered under this functional value, and the New Hampshire Method stresses non-powered boating since it is less disruptive to the wetland environment. Please reference Exhibit 34 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 7: Flood Control Potential

Freshwater wetlands act as natural storage areas reducing downstream flood peaks. They can also act as natural flood regulators by temporarily storing floodwaters and then slowly releasing the floodwaters over time. During a heavy rain event, the wetland vegetation and soils slow the water entering the wetland from rainfall, surface runoff and stream flow. This reduces the amount of waters entering the main stream or river at the peak of the flood and ensures that floodwaters from the tributaries do not reach the main river at the same time.

The two main factors that influence the effectiveness of a wetland in reducing downstream flood peaks are the storage potential of the wetland and a measure of how slowly the wetland will release the stored water. Storage potential is assessed by comparing the size of the wetland with the watershed area that could contribute water from snowmelt or heavy rainfall, or both. In general, a large wetland with a small contributing watershed will be more effective for flood control than a small wetland with a large watershed. The rate of release of the stored water is related to the size and shape of the wetland outlet.

The New Hampshire Method uses a table that provides an index value drawn from calculations of areas and measurements of flow restrictions to determine a value for wetland flood control potential. In this evaluation, the flood control potential is a function of the relationship between

the wetland area-to-watershed ratio, and the size of the restrictive feature at the outlet. A wetland with a small contributing watershed but a wide outlet with little restriction will score lower than the same wetland with a narrow restricted outlet. Please reference Exhibit 35 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 8: Ground Water Use Potential

Although wetlands are most frequently groundwater discharge areas they can also play an important role in recharging ground water aquifers in some cases. This function is evaluated only if a wetland is upstream of a stratified drift aquifer or if the wetland is overlying all or part of a stratified drift aquifer. Stratified drift aquifers are generally assumed to have a high potential to yield water. Stratified drift aquifer locations were assessed using maps provided by the UNH GRANIT GIS Clearinghouse. Please reference Exhibit 36 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 9: Sediment Trapping

Runoff from a heavy rainfall may cause erosion and sedimentation, which can cause damage to aquatic ecosystems. Accumulated sediment in the stream bottom can smother gravel spawning areas and kill aquatic insect larvae, an important food source for fish. Sediment can also reduce the capacity of downstream water supplies. Wetland vegetation can slow the water flow and remove some of the sediment loads before the water moves downstream.

The New Hampshire Method evaluates the opportunity for a wetland to trap sediment based on the current land use in the watershed above it. The evaluation also considers the overall potential for sediment trapping by measuring the potential trap efficiency of the wetland. Please reference Exhibit 37 for a map illustrating the relative value of each prime wetland candidate for this function.

Function/Value 10: Nutrient Attenuation

Excessive amounts of nutrients from fertilizers used in agricultural fields and on lawns, or from other urban activities, can contribute to algal blooms and oxygen deficiencies in lakes and slow moving streams resulting in fish kills and reduced water quality. Within reason, a wetland can reduce the impact of nutrient levels in a downstream waterbody and thereby reduce the effects of eutrophication. Because wetlands serve as buffers between upland areas and waterbodies they can intercept and absorb excess nutrients transported in runoff waters. Some nitrogen can be released to the atmosphere as a harmless gas, although much of the excess nitrogen, as well as phosphorus, can be stored in sediments or taken up by wetland vegetation.

The New Hampshire Method considers the opportunity for a wetland to attenuate nutrient impacts on downstream waterbodies by evaluating the current land use in the watershed above the wetland, as well as the potential for the wetland to retain or otherwise attenuate nutrients (typically a function of vegetation density and water flow). Please reference Exhibit 38 for a map illustrating the relative value of each prime wetland candidate for this function.

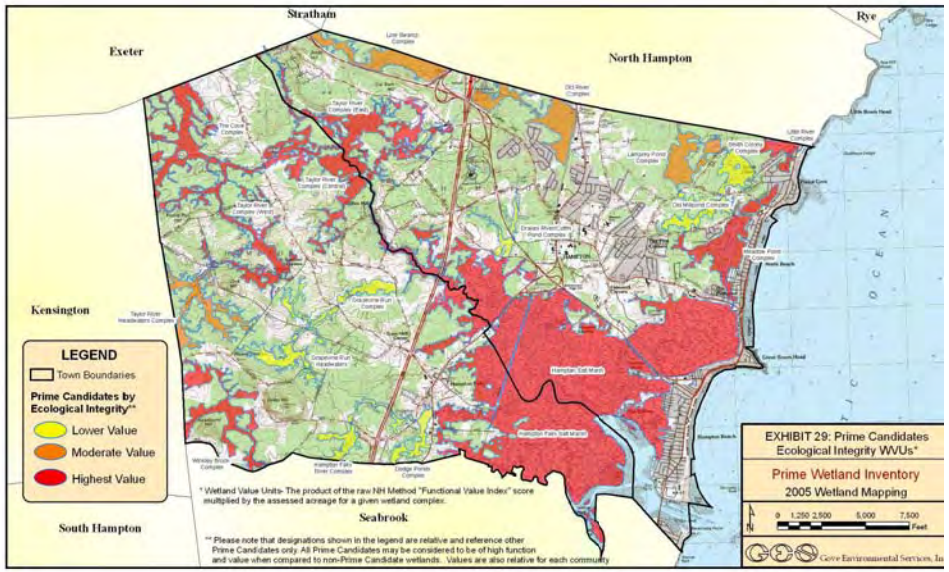
Function/Value 14: Noteworthiness

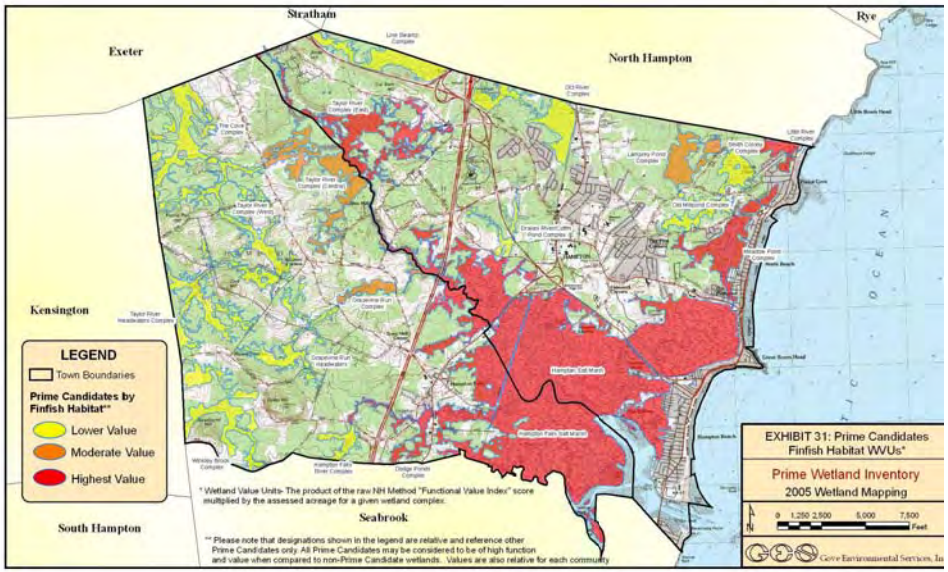
This Functional Value considers certain features a wetland may possess which give it a high value regardless of any other attribute. These features include:

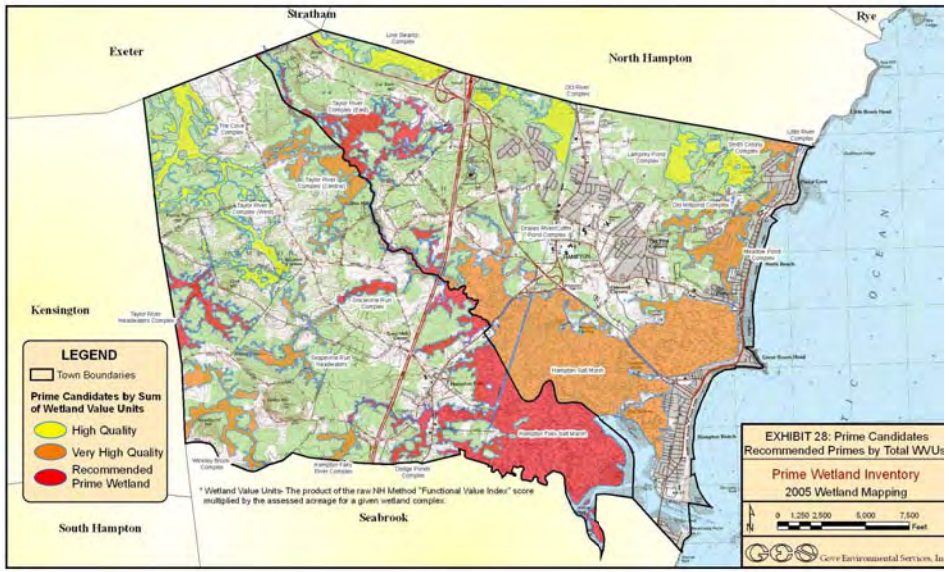
1. Critical habitat for a State or Federally listed threatened or endangered species;
2. The wetland is a known study site for scientific research;
3. National Natural Landmark status, or recognized as a exemplary natural community in New Hampshire by the New Hampshire Natural Heritage Inventory;
4. Locally significant because the wetland ranks among the highest number of Wetland Value Units within the study area for one or more Functional Values;
5. Locally significant because the wetland has biological, geological, or other features which are locally rare or unique;
6. Contains an important archaeological site; and
7. Wetland is hydrologically connected to a State or Federally designated river.

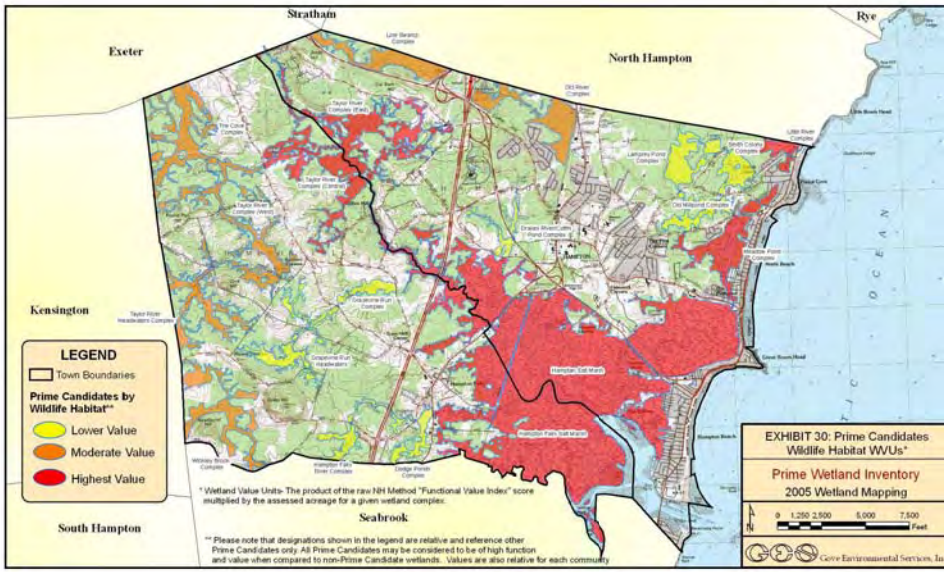
Note that a FVI of 1.0 is assumed if the wetland meets any of the above criteria. Please reference Exhibit 42 for a map illustrating the relative value of each prime wetland candidate for this function.

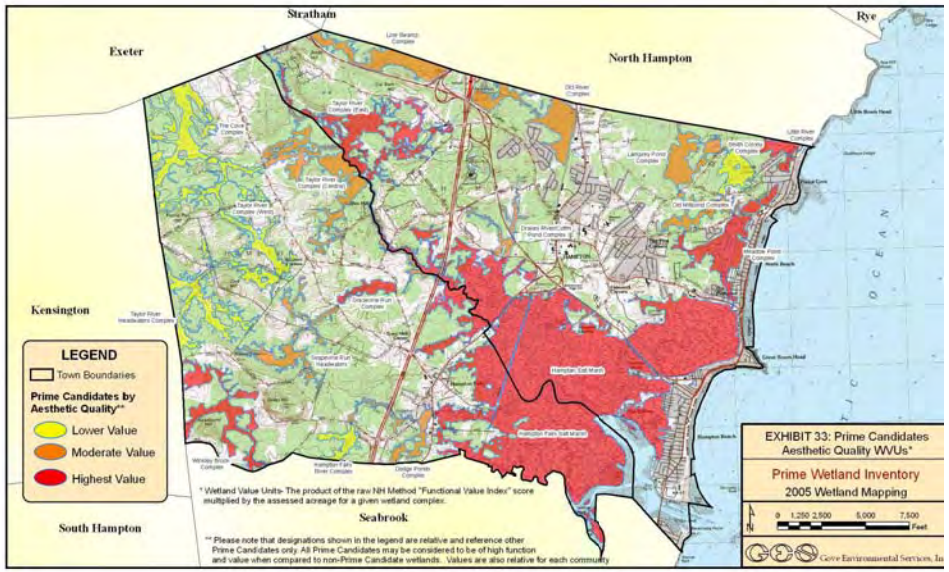
EXHIBITS 28–42
RELATIVE VALUE OF PRIME WETLAND CANDIDATES FOR EACH FUNCTION AND VALUE

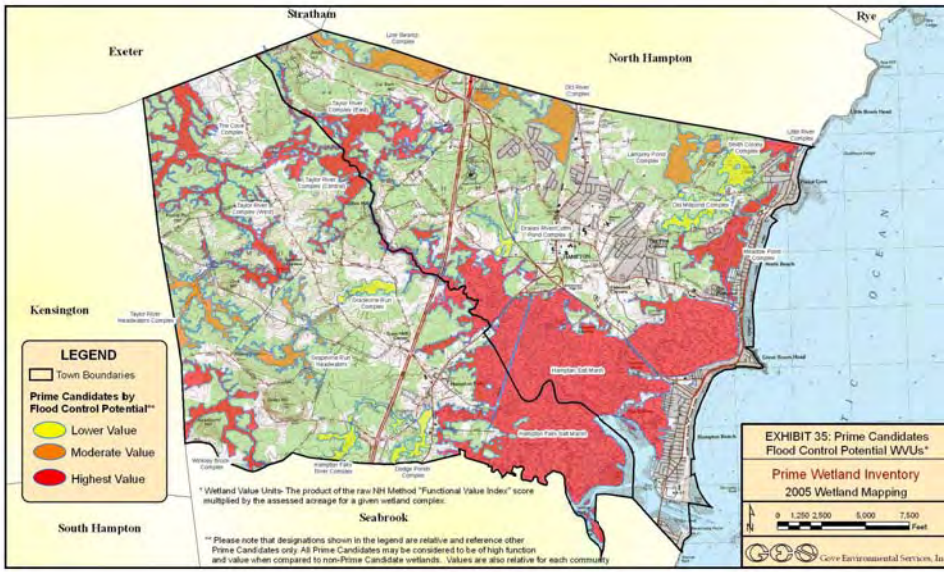

Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Ecological Integrity**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 29: Prime Candidates Ecological Integrity WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.

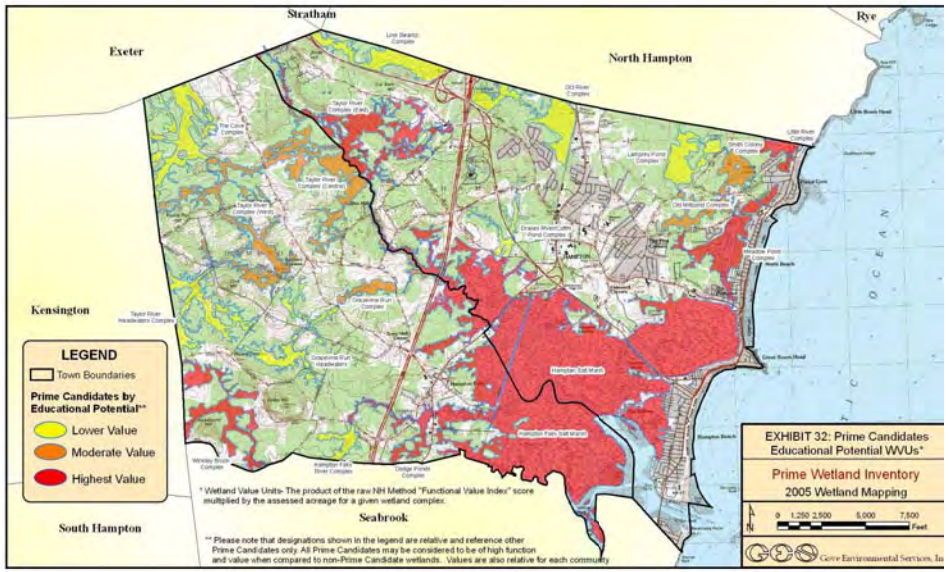

Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Finfish Habitat**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 31: Prime Candidates Finfish Habitat WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.

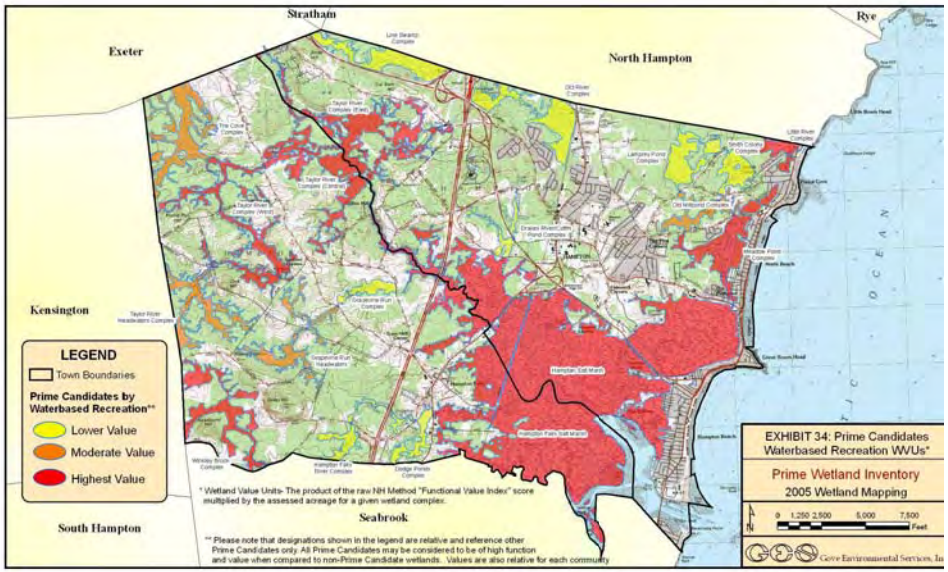

Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Sum of Wetland Value Units
High Quality
Very High Quality
Recommended Prime Wetland
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
EXHIBIT 28: Prime Candidates Recommended Primes by Total WVUs
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.

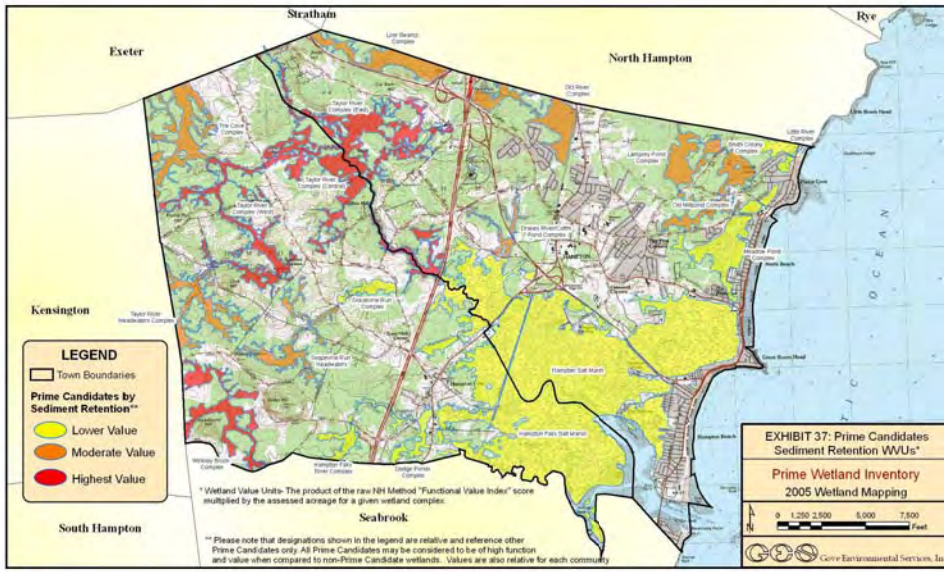

Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Wildlife Habitat**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 30: Prime Candidates Wildlife Habitat WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.

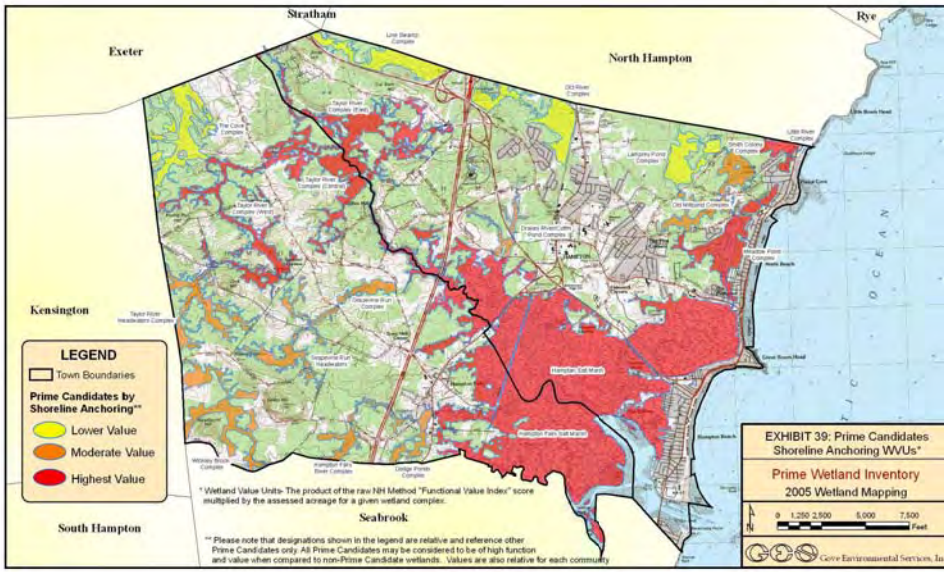

Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Aesthetic Quality**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 33: Prime Candidates Aesthetic Quality WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.

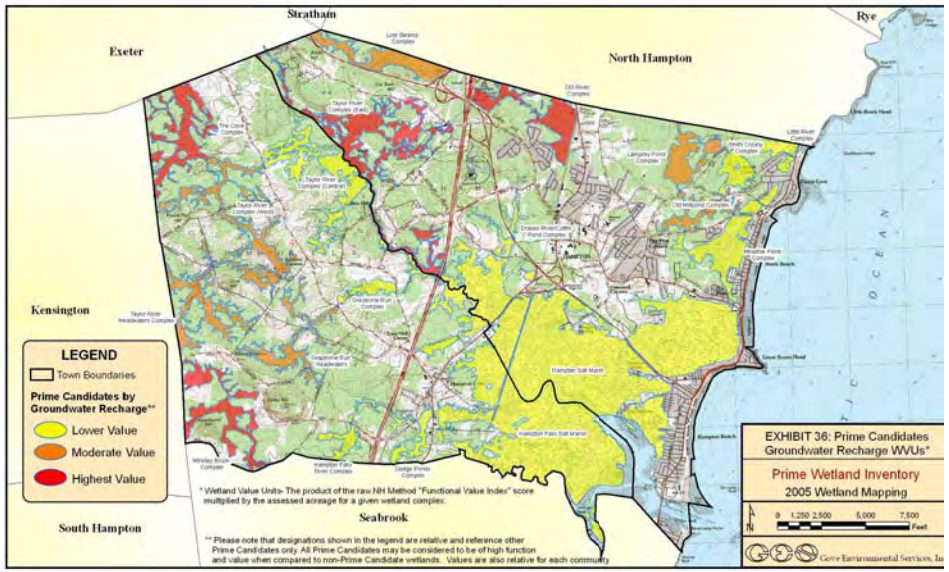

Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Flood Control Potential**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 35: Prime Candidates Flood Control Potential WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.

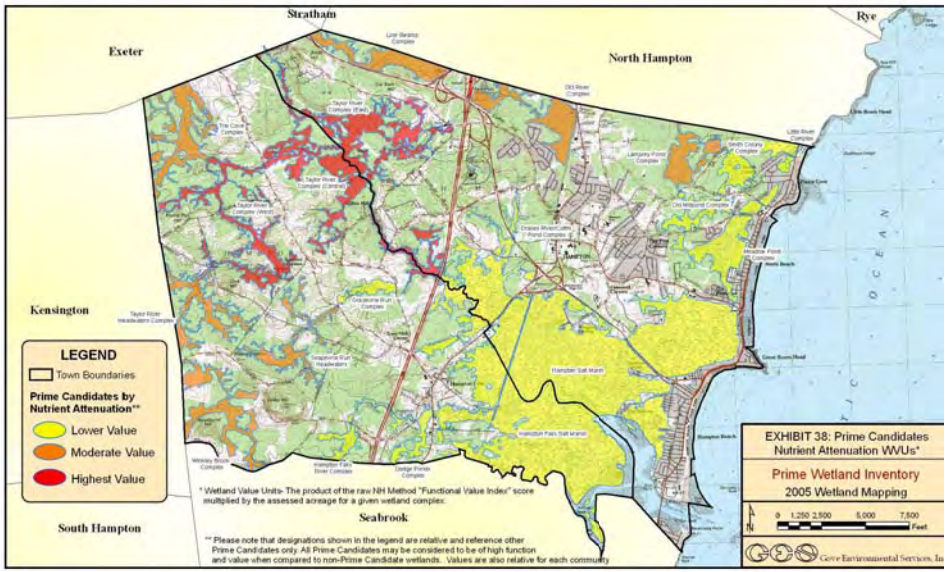

Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Educational Potential**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 32: Prime Candidates Educational Potential WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.

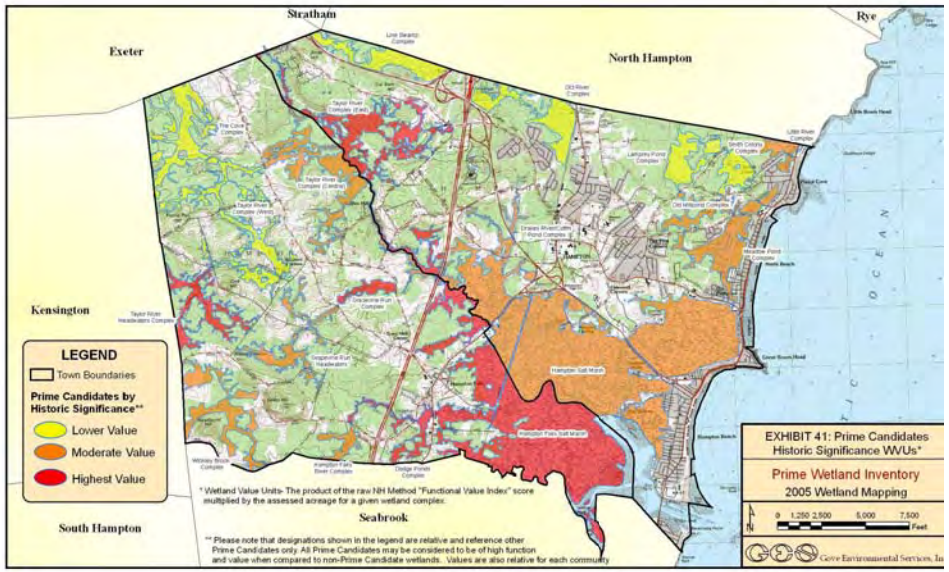

Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Waterbased Recreation**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 34: Prime Candidates Waterbased Recreation WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.

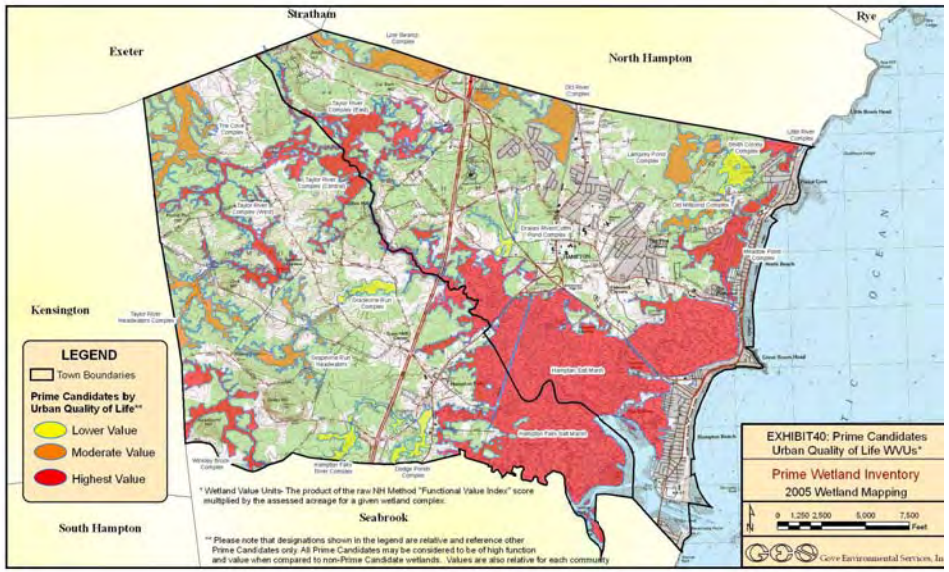

Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Sediment Retention**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 37: Prime Candidates Sediment Retention WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.

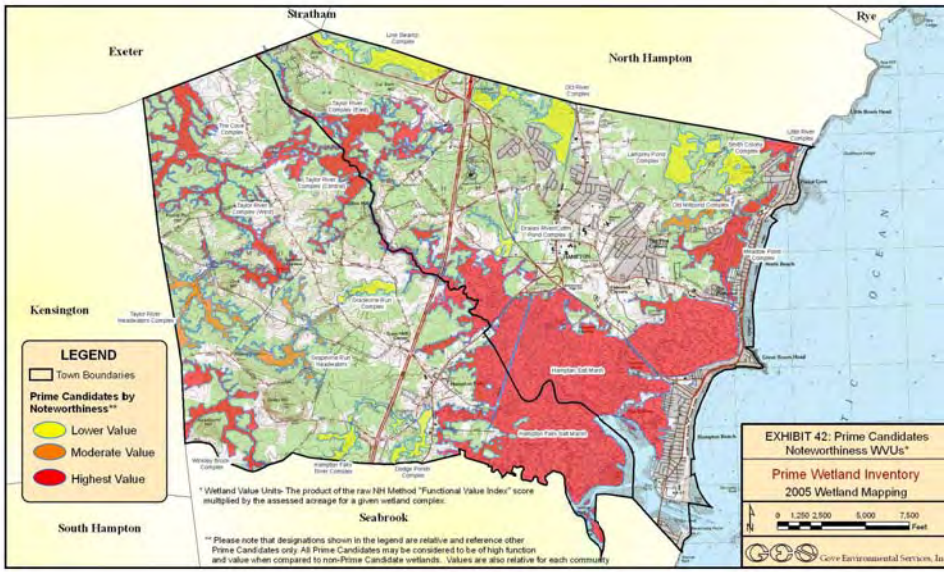

Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Shoreline Anchoring**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 39: Prime Candidates Shoreline Anchoring WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.


Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Groundwater Recharge**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 36: Prime Candidates Groundwater Recharge WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.


Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Nutrient Attenuation**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 38: Prime Candidates Nutrient Attenuation WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.


Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Historic Significance**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 41: Prime Candidates Historic Significance WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.


Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Urban Quality of Life**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT40: Prime Candidates Urban Quality of Life WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.


Stratham
Rye
Exeter
North Hampton
Kensington
South Hampton
Seabrook
OCEAN
LEGEND
Town Boundaries
Prime Candidates by Noteworthiness**
Lower Value
Moderate Value
Highest Value
* Wetland Value Units- The product of the raw NH Method "Functional Value Index" score multiplied by the assessed acreage for a given wetland complex.
** Please note that designations shown in the legend are relative and reference other Prime Candidates only. All Prime Candidates may be considered to be of high function and value when compared to non-Prime Candidate wetlands. Values are also relative for each community
EXHIBIT 42: Prime Candidates Noteworthiness WVUs*
Prime Wetland Inventory
2005 Wetland Mapping
0 1,250 2,500 5,000 7,500 Feet
Gove Environmental Services, Inc.

RECOMMENDATIONS FOR PRIME WETLAND DESIGNATION

Prime wetlands represent the highest functioning and, hence, most ecologically and culturally valuable wetlands within a community. All Prime Candidates analyzed in this report are significantly greater than 2 acres in size and are primarily comprised of very poorly drained soils. In that sense, all of the Prime Candidates in both Hampton and Hampton Falls are significant natural resources and every effort should be made to maintain their ecological integrity.

However, despite the elevated value of all wetlands within the study group, statistical analysis reveals several tiers (or natural break points) when the sums of the wetland value units (WVU's)[1] for each candidate are compared. These natural break points, shown for both communities in the tables below, form the basis for the complexes recommended for Prime Wetland designation. Please note that Total Wetland Value Units for tidal wetlands are the result of an assigned, adjusted figure based on the pre-study agreement between Gove Environmental Services, Inc. and the town Conservation Commissions that all tidal wetlands within the study area will be considered *de facto* prime due to their rarity, size and noteworthiness.

Wetland Complex (Hampton)	Size (acres)	Total Wetland Value Units
Taylor River Complex (East)	327.60	2,656.51
Old River Complex	157.30	814.59
Line Swamp Complex	131.10	686.69
Lamprey Pond Complex	111.00	611.66
Old Millpond Complex	69.50	567.46
Smith Colony Complex	65.90	295.52
Drakes River/Coffin Pond Complex	45.20	283.63

Wetland Complex (Hampton Falls)	Size (acres)	Total Wetland Value Units
Taylor River Complex (Central)	244.90	1,931.08
Taylor River Complex (West)	221.40	1,737.25
Winkley Brook Complex	206.40	1,736.37
The Cove Complex	186.90	1,368.03
Taylor River Headwaters	141.50	1,197.23
Dodge Ponds Complex	73.50	447.38
Grapevine Run Complex	40.70	397.55
Hampton Falls River Complex	40.50	364.61
Grapevine Run Headwaters	113.00	339.60

[1] Wetland Value Units. The product of the raw NH Method "Functional Value Index"

RECOMMENDATIONS FOR HAMPTON PRIME WETLANDS

Four wetland complexes are recommended for prime designation in Hampton. These complexes are the Hampton Salt Marsh, the Little River Complex, the Meadow Pond Complex and the Taylor River (East) Complex. The first three wetlands are large tidal complexes while the latter is the largest freshwater complex in this study. Brief descriptions of each are provided below.

Hampton Salt Marsh Complex

The Hampton Salt Marsh Complex is approximately 1745 acres in size and is associated with the mouth of the Blackwater and Hampton Rivers where they enter the Atlantic Ocean. The sheer size of this wetland complex, coupled with the rarity of salt marsh in New Hampshire, greatly elevates the value of this braided network of flats, channels and *Spartina* spp. plains. Many of the other Hampton wetland complexes that were assessed in this study ultimately drain to this wetland system. This wetland supports abundant populations of wading birds and other waterfowl, serves as breeding ground and habitat for many species of baitfish and crustaceans, and is important habitat for larger fish species including striped bass. Additionally, this complex (along with the contiguous Hampton Falls Salt Marsh Complex) provides significant flood storage and protection from tidal storm surges. While the Hampton Salt Marsh is protected by a state Tidal Buffer Zone[2] and additional local regulations, Prime Wetland designation is still recommended, with the agreement of the Conservation Commission, as a means of umbrella oversight and protection for this area.

Meadow Pond Complex

According to historical accounts, the 187-acre Meadow Pond Complex was created by an exceptionally powerful winter storm and accompanying tidal surge in 1724. Just as the complex was created by tidal hydrology, it was the interruption of tidal flow that led to the degradation of this system in the 20th century. However, in 1996, a large storm nearly succeeded in restoring flow to the complex by washing out a restrictive culvert. This culvert was replaced by a 24-foot wide concrete culvert that greatly improved flow to the wetland and restored significant levels of tidal function and value. While large stands of the invasive *Phragmites* spp. reed (indicative of interrupted hydrology) still remain within this complex, large stands of the reed have died out and have naturally regenerated to native salt marsh species. Further studies and restoration efforts are currently underway.

Comprised of large area of emergent vegetation, large expanses of open water and frequently bordered by forested and scrub-shrub wetlands, this complex is situated in a densely populated residential portion of Hampton. Significant development has occurred up to its edge in many areas, and there are undoubtedly many areas of historic fill. Despite these limitations, the size of this wetland complex, coupled with the rarity tidal wetlands in New Hampshire, greatly elevates the value of this complex. The ecological integrity of this area has been significantly restored in the last 15 years, and the potential for additional restoration is apparent. As was the case with

[2]Wt 101.90 "Tidal buffer zone" means the area extending landward 100 feet from the highest observable tide line. This area can contain wetlands, transitional areas, and natural and developed upland areas. NH Code Admin. R. [Wt] Ch. 100–800.

the Hampton Salt Marsh Complex, Meadow Pond is protected by a state Tidal Buffer Zone and additional local regulations. However, Prime Wetland designation is still recommended, with the agreement of the Conservation Commission, as a means of umbrella oversight and protection for this area.

Little River Complex

The Little River Complex comprises approximately 48 acres in the easternmost portion of Hampton, just south of the North Hampton boundary. Like the Meadow Pond Complex, this wetland has suffered historically as a result of the interruption of tidal flow. Significant restoration efforts have been undertaken to restore the ecological integrity of this area, with great success.[3] As a result, non-native vegetation such as *Phragmites*, purple loosestrife and other invasive species are gradually giving way to salt meadow cord grass and spike grass. It is expected that this transition will continue as long as tidal connectivity is maintained. The Little River Complex is a case study for salt marsh restoration in New England and is a valuable resource for the Town of Hampton. As was the case with the other tidal complexes in Hampton, this area is protected by a state Tidal Buffer Zone and additional local regulations. However, Prime Wetland designation is still recommended, with the agreement of the Conservation Commission, as a means of umbrella oversight and protection for this area.

Taylor River (East) Complex

The Taylor River (East) Complex is the largest freshwater wetland system in the study area. This complex comprises 327 acres with additional contiguous portions in Hampton Falls. Much of this complex is associated with the main branch of the Taylor River that forms much of the boundary between Hampton and Hampton Falls. This complex is notable for several reasons, foremost being its size. The Taylor River (East) Complex consists of many distinct classes of wetland, under the Cowardin (USFWS) Classification System, spread along nearly 6.5 miles of river and stream channel. Additional forested wetlands adjacent to the riparian habitat add to the value of this system.

While no rare, threatened or endangered species or communities have been documented by the NH Natural Heritage Inventory within the limits of this complex, this may reflect an absence of surveys within this area. The area is certainly significant wetland wildlife habitat. Additionally, the value of the area is enhanced by a nearly 1,200–acre block of relatively unfragmented forest and wetland habitat that forms the core of the wetland complex. Because of these factors, as well as the large percentage of Very Poorly Drained soils in this complex, and because the Taylor River (East) Complex is associated with perhaps the largest remaining block of forested wildlife habitat in Hampton, Prime Wetland designation is recommended for this very valuable wetland system.

[3] Little River Salt Marsh Restoration Project.
http://www.nh.nrcs.usda.gov/technical/Ecosystem_Restoration/Little_River.html#summary

RECOMMENDATIONS FOR HAMPTON FALLS PRIME WETLANDS

Four wetland complexes are recommended for prime designation in Hampton Falls. These complexes are the Hampton Falls Salt Marsh, the Taylor River (Central) Complex, the Taylor River (West) Complex and the Winkley Brook Complex. The first wetland is a large tidal complex while the latter wetlands are major freshwater complexes. Brief descriptions of each are provided below.

Hampton Falls Salt Marsh Complex

The Hampton Salt Marsh Complex is approximately 1110 acres in size and is associated with the mouth of the Hampton Falls River, Blackwater River and Hampton River where they enter the Atlantic Ocean. The sheer size of this wetland complex, coupled with the rarity of salt marsh in New Hampshire, greatly elevates the value of this braided network of flats, channels and *Spartina* spp. planes. Many of the other Hampton Falls wetland complexes that were assessed in this study ultimately drain to this wetland system. This wetland supports abundant populations of wading birds and other waterfowl, serves as breeding ground and habitat for many species of baitfish and crustaceans, and is important habitat for larger fish species including striped bass. Additionally, this complex (along with the contiguous Hampton Salt Marsh Complex) provides significant flood storage and protection from tidal storm surges.

While the Hampton Falls Salt Marsh is protected by a state Tidal Buffer Zone and additional local regulations, Prime Wetland designation is still recommended, with the agreement of the Conservation Commission, as a means of umbrella oversight and protection for this area.

Taylor River (Central) Complex

The Taylor River (Central) Complex is the largest freshwater wetland system in Hampton Falls. This complex comprises 245 acres with additional contiguous portions in Hampton. Much of this complex is associated with the main branch of the Taylor River that forms much of the boundary between Hampton and Hampton Falls. This complex is notable for several reasons, foremost being its size. The Taylor River (Central) Complex consists of many distinct classes of wetland, under the Cowardin (USFWS) Classification System, spread along nearly 7.5 miles of river and stream channel. Additional forested wetlands adjacent to the riparian habitat add to the value of this system.

While no rare, threatened or endangered species or communities have been documented by the NH Natural Heritage Inventory within the limits of this complex, this may reflect an absence of surveys within this area. The area is certainly significant wetland wildlife habitat. Large expanses of open water, broad stream and river channels, and a variety of upland habitat types provide habitat for wildlife species ranging from smallmouth bass, to spotted salamanders, to moose and the occasional black bear. The linear nature of this system, as well as its close association with the Taylor River, make this wetland complex an ideal migratory corridor for species moving between large blocks of habitat in Hampton Falls. Prime Wetland designation is recommended for this valuable wetland system.

Taylor River (West) Complex

The Taylor River (West) Complex comprises nearly 222 acres in the northwestern portion of Hampton Falls. This wetland system is hydrologically connected to other Prime Wetland candidates in this study including the Cove Complex and the Taylor River (Central) Complex. However, despite the hydrologic connectivity, several manmade features such as roads and culverts serve as limits to the extent of functional contiguity. Despite these limits, the interspersion of emergent, scrub-shrub, and forested wetlands along with both forested and agricultural uplands provide a diverse mix of habitat types for fish, insect, amphibian, reptile, avian and mammal wildlife species. Development is beginning to encroach on this complex, and as a result, the systems already high flood storage, sediment retention and nutrient uptake values become further elevated. This system serves as a primary line of defense for the Taylor River itself. With this in mind, Prime Wetland designation is recommended for this valuable wetland system.

Winkley Brook Complex

The Winkley Brook Complex comprises 206 acres in the southwest corner of Hampton Falls. This sprawling complex spreads throughout high-quality upland forest and skirts several large agricultural fields. Winkley Brook itself is a popular trout fishery that is annually stocked by the NH Department of Fish & Game. This complex ranked in the upper echelons of the study group for both ecological integrity and wildlife habitat (when size is taken into consideration). Additionally, the wetland system provides significant flood storage, sediment retention and nutrient uptake, the latter two functions being of some importance given the proximity of the complex to active agricultural areas. Further, this system enjoys perhaps the largest and least disturbed buffer of the Hampton Falls study group. With this in mind, Prime Wetland designation is recommended for this valuable wetland system.

HABITAT, CONSERVATION AND RESTORATION OPPORTUNITIES

Significant Wetland Habitat

As documented in this report, the all of the wetlands recommended for Prime designation within the study area rates as high value significant wildlife habitat. This is also true to a lesser extent with regards to assessed wetland complexes that were not recommended for Prime designation. Perhaps the most common examples of wetland wildlife habitat that most people think of are vernal pools. Vernal pools are areas of temporarily ponded water that flood in the spring and dry in mid to late summer. These pools typically occur in the same locations from year to year. Because these pools dry each year, they cannot support fish populations. As a result, these areas become very attractive to pond breeding amphibians such as spotted salamanders (*Ambystoma maculatum*) and wood frogs (*Rana sylvatica*) among others. These species spend the majority of each year in upland habitat but return to vernal pools in the spring to mate and deposit egg masses that gradually mature as the pool dries. The absence of fish in the pools minimizes the potential for predation on eggs and juvenile amphibians (metamorphs). In recent times, the term vernal pool has been used in a loose sense to encompass any small ponded area that supports breeding amphibians regardless of its hydroperiod.

Aerial photo analysis and field reconnaissance did not identify any classic vernal pools within the study area, however this may be a function of the autumn survey period. Despite this, it is important to note that pond-breeding amphibians frequently and successfully use small ponded areas such as deep puddles associated with tree tip-ups as breeding habitat. Additionally, small portions of larger ponds are often employed. As a result, it is likely that there are hundreds of small amphibian breeding areas within the forested and scrub-shrub wetland matrix that surrounds much of the study area. With this in mind, designation of an appropriate buffer adjacent wetlands within the study area is an important step towards protecting the upland and wetland habitat that is critical to the longevity of these species.

Significant Upland Habitat

A nearly 1,200–acre block of relatively unfragmented forest and wetland habitat forms the core of the Taylor River (East) Complex. This area is very roughly bounded by Route 88 to the west, Route 27 to the north and east, and Timber Swamp Road to the south. This area is a tremendous resource to both Hampton and Hampton Falls as it is a large block of land of which a significant portion functions as interior forest habitat suitable for species such as black bear, fisher, bobcat, moose and scarlet tanagers. These species are rare in southern New Hampshire due to the absence of large blocks of unbroken habitat. Additionally, this area is linked to other smaller habitat blocks both within and adjacent the study area by natural travel corridors associated with the stream and rivers of the Taylor River system.

Conservation Opportunities

While it is outside the scope of this study to identify conservation opportunities in the subject communities, it is recommended that the conservation committees coordinate with the open space committees regarding the large blocks of habitat associated with Prime Candidate One and Prime Candidate Three described in other portions of this report.

Restoration Opportunities

Several excellent restoration opportunities exist within Hampton and Hampton Falls, primarily associated with salt marsh areas. In Hampton, efforts to further control invasive species can be undertaken in the Meadow Pond Complex and the Little River Complex. Within Hampton Falls, efforts to control purple loosestrife, narrow-leaved cattail and *Phragmites* spp. could yield excellent results in the Grapevine Run Complex.

Additionally, a recent report funded by the New Hampshire Estuaries Program and conducted for the New Hampshire Office of State Planning entitled "Freshwater Wetland Mitigation Inventory for Nineteen Coastal Communities"[4] provides detailed descriptions of wetland restoration opportunities that go beyond the scope of this report. The mitigation inventory covers both Hampton and Hampton Falls and will be available to the public shortly.

[4] http://www.nhep.unh.edu/resources/pdf/freshwaterwetlandsmitigation-west-04.pdf

CONCLUSION

This study assessed twenty large wetland systems and recommended eight complexes for Prime Wetland designation. Four of the recommended complexes were tidal, and four were freshwater systems. Because, by it's nature, a prime wetland study seeks to identify the best of the best wetlands, several deserving wetland complexes were not recommended for designation. Statistical analysis of summary Wetland Value Unit totals clearly identified three natural breaks in the wetland scores. Only wetlands comprising the top tier within each community were recommended.

However, this should not take away from the value of the remaining wetlands within the study group. These wetlands are all large systems with significant function and value when compared to the "average" wetland. With this in mind, the Town's should retain the ability to propose additional Prime Wetland designees from the study group as changing development patterns, new threshold conditions and other variables come to light.

APPENDIX I
NH METHOD SUMMARY SHEETS

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Ecological Integrity
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Ecological Integrity	Rank
Taylor River Complex (East)	Hampton	327.60	232.60	1
Line Swamp Complex	Hampton	131.10	98.33	2
Old River Complex	Hampton	157.30	95.95	3
Lamprey Pond Complex	Hampton	111.00	75.48	4
Smith Colony Complex	Hampton	65.90	40.20	5
Old Millpond Complex	Hampton	69.50	39.62	6
Drakes River/Coffin Pond Complex	Hampton	45.20	23.96	7
The Cove Complex	Hampton Falls	186.90	175.69	1
Taylor River Complex (Central)	Hampton Falls	244.90	161.63	2
Winkley Brook Complex	Hampton Falls	206.40	158.93	3
Taylor River Complex (West)	Hampton Falls	221.40	152.77	4
Taylor River Headwaters	Hampton Falls	141.50	127.35	5
Grapevine Run Headwaters	Hampton Falls	113.50	68.10	6
Dodge Ponds Complex	Hampton Falls	73.50	47.78	7
Hampton Falls River Complex	Hampton Falls	40.50	32.81	8
Grapevine Run Complex	Hampton Falls	40.70	31.34	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Wildlife Habitat Value
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Wildlife Habitat	Rank
Taylor River Complex (East)	Hampton	327.6	291.56	1
Old River Complex	Hampton	157.3	103.82	2
Line Swamp Complex	Hampton	131.1	90.46	3
Lamprey Pond Complex	Hampton	111	64.38	4
Old Millpond Complex	Hampton	69.5	44.48	5
Smith Colony Complex	Hampton	65.9	34.27	6
Drakes River/Coffin Pond Complex	Hampton	45.2	27.12	7
Taylor River Complex (Central)	Hampton Falls	244.9	217.96	1
Taylor River Complex (West)	Hampton Falls	221.4	174.91	2
The Cove Complex	Hampton Falls	186.9	162.60	3
Winkley Brook Complex	Hampton Falls	206.4	154.80	4
Taylor River Headwaters	Hampton Falls	141.5	125.94	5
Grapevine Run Headwaters	Hampton Falls	113.5	91.90	6
Dodge Ponds Complex	Hampton Falls	73.5	52.92	7
Hampton Falls River Complex	Hampton Falls	40.5	38.07	8
Grapevine Run Complex	Hampton Falls	40.7	35.00	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Fish Species River and Stream Habitat Value
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Fish Stream/River	Rank
Taylor River Complex (East)	Hampton	327.60	62.44	1
Old River Complex	Hampton	157.30	1.38	2
Drakes River/Coffin Pond Complex	Hampton	45.20	0.41	3
Line Swamp Complex	Hampton	131.10	0.00	4
Lamprey Pond Complex	Hampton	111.00	0.00	4
Old Millpond Complex	Hampton	69.50	0.00	4
Smith Colony Complex	Hampton	65.90	0.00	4
Taylor River Complex (Central)	Hampton Falls	244.90	12.75	1
Dodge Ponds Complex	Hampton Falls	73.50	8.70	2
Grapevine Run Complex	Hampton Falls	40.70	5.22	3
Taylor River Headwaters	Hampton Falls	141.50	4.64	4
Taylor River Complex (West)	Hampton Falls	221.40	4.06	5
Grapevine Run Headwaters	Hampton Falls	113.50	3.84	6
Hampton Falls River Complex	Hampton Falls	40.50	3.04	7
Winkley Brook Complex	Hampton Falls	206.40	2.84	8
The Cove Complex	Hampton Falls	186.90	0.00	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Fish Species Lake and Pond Habitat Value
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Fish Lake/Pond	Rank
Taylor River Complex (East)	Hampton	327.60	14.09	1
Lamprey Pond Complex	Hampton	111.00	5.56	2
Old Millpond Complex	Hampton	69.50	1.90	3
Old River Complex	Hampton	157.30	0.00	4
Line Swamp Complex	Hampton	131.10	0.00	4
Smith Colony Complex	Hampton	65.90	0.00	4
Drakes River/Coffin Pond Complex	Hampton	45.20	0.00	4
Dodge Ponds Complex	Hampton Falls	73.50	7.80	1
Grapevine Run Complex	Hampton Falls	40.70	3.60	2
Taylor River Complex (Central)	Hampton Falls	244.90	0.00	3
Taylor River Complex (West)	Hampton Falls	221.40	0.00	3
Winkley Brook Complex	Hampton Falls	206.40	0.00	3
The Cove Complex	Hampton Falls	186.90	0.00	3
Taylor River Headwaters	Hampton Falls	141.50	0.00	3
Grapevine Run Headwaters	Hampton Falls	113.50	0.00	3
Hampton Falls River Complex	Hampton Falls	40.50	0.00	3

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Educational Potential
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Educational Potential	Rank
Taylor River Complex (East)	Hampton	327.60	12.00	1
Old Millpond Complex	Hampton	69.50	10.40	2
Smith Colony Complex	Hampton	65.90	8.40	3
Lamprey Pond Complex	Hampton	111.00	5.52	4
Drakes River/Coffin Pond Complex	Hampton	45.20	4.24	5
Line Swamp Complex	Hampton	131.10	3.64	6
Old River Complex	Hampton	157.30	3.00	7
Dodge Ponds Complex	Hampton Falls	73.50	13.20	1
Winkley Brook Complex	Hampton Falls	206.40	11.60	2
Taylor River Complex (Central)	Hampton Falls	244.90	5.60	3
Grapevine Run Complex	Hampton Falls	40.70	4.80	4
Taylor River Complex (West)	Hampton Falls	221.40	4.16	5
Taylor River Headwaters	Hampton Falls	141.50	3.25	6
Grapevine Run Headwaters	Hampton Falls	113.50	2.75	7
Hampton Falls River Complex	Hampton Falls	40.50	1.71	8
The Cove Complex	Hampton Falls	186.90	0.00	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Visual/Aesthetic Value
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Visual/Aesthetic	Rank
Taylor River Complex (East)	Hampton	327.60	14.00	1
Old Millpond Complex	Hampton	69.50	10.60	2
Lamprey Pond Complex	Hampton	111.00	10.50	3
Line Swamp Complex	Hampton	131.10	10.00	4
Old River Complex	Hampton	157.30	8.85	5
Drakes River/Coffin Pond Complex	Hampton	45.20	7.70	6
Smith Colony Complex	Hampton	65.90	4.16	7
Winkley Brook Complex	Hampton Falls	206.40	17.00	1
Grapevine Run Complex	Hampton Falls	40.70	16.80	2
Taylor River Complex (Central)	Hampton Falls	244.90	13.44	3
Dodge Ponds Complex	Hampton Falls	73.50	12.24	4
Grapevine Run Headwaters	Hampton Falls	113.50	10.56	5
Taylor River Complex (West)	Hampton Falls	221.40	8.30	6
The Cove Complex	Hampton Falls	186.90	7.60	7
Hampton Falls River Complex	Hampton Falls	40.50	6.72	8
Taylor River Headwaters	Hampton Falls	141.50	5.04	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Water-based Recreational Values
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Water Recreation	Rank
Taylor River Complex (East)	Hampton	327.60	74.88	1
Old Millpond Complex	Hampton	69.50	23.46	2
Drakes River/Coffin Pond Complex	Hampton	45.20	10.00	3
Lamprey Pond Complex	Hampton	111.00	5.28	4
Old River Complex	Hampton	157.30	0.00	5
Line Swamp Complex	Hampton	131.10	0.00	5
Smith Colony Complex	Hampton	65.90	0.00	5
Taylor River Complex (Central)	Hampton Falls	244.90	176.33	1
Winkley Brook Complex	Hampton Falls	206.40	144.48	2
Taylor River Complex (West)	Hampton Falls	221.40	139.48	3
Taylor River Headwaters	Hampton Falls	141.50	101.88	4
The Cove Complex	Hampton Falls	186.90	82.24	5
Grapevine Run Headwaters	Hampton Falls	113.50	73.78	6
Hampton Falls River Complex	Hampton Falls	40.50	29.16	7
Grapevine Run Complex	Hampton Falls	40.70	26.46	8
Dodge Ponds Complex	Hampton Falls	73.50	6.50	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Flood Control Potential
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Flood Control	Rank
Taylor River Complex (East)	Hampton	327.60	327.00	1
Old River Complex	Hampton	157.30	157.30	2
Line Swamp Complex	Hampton	131.10	131.10	3
Lamprey Pond Complex	Hampton	111.00	111.00	4
Old Millpond Complex	Hampton	69.50	69.00	5
Smith Colony Complex	Hampton	65.90	46.13	6
Drakes River/Coffin Pond Complex	Hampton	45.20	45.20	7
Taylor River Complex (Central)	Hampton Falls	244.90	244.90	1
Taylor River Complex (West)	Hampton Falls	221.40	221.40	2
Winkley Brook Complex	Hampton Falls	206.40	206.40	3
The Cove Complex	Hampton Falls	186.90	186.90	4
Taylor River Headwaters	Hampton Falls	141.50	141.50	5
Grapevine Run Headwaters	Hampton Falls	113.50	113.50	6
Grapevine Run Complex	Hampton Falls	40.70	40.70	7
Hampton Falls River Complex	Hampton Falls	40.50	40.50	8
Dodge Ponds Complex	Hampton Falls	73.50	29.40	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Ground Water Use Potential
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Ground Water Use	Rank
Taylor River Complex (East)	Hampton	327.60	173.31	1
Old River Complex	Hampton	157.30	138.42	2
Line Swamp Complex	Hampton	131.10	98.33	3
Lamprey Pond Complex	Hampton	111.00	97.68	4
Old Millpond Complex	Hampton	69.50	52.44	5
Smith Colony Complex	Hampton	65.90	34.93	6
Drakes River/Coffin Pond Complex	Hampton	45.20	18.08	7
Winkley Brook Complex	Hampton Falls	206.40	181.63	1
The Cove Complex	Hampton Falls	186.90	140.18	2
Taylor River Complex (West)	Hampton Falls	221.40	88.56	3
Taylor River Headwaters	Hampton Falls	141.50	56.60	4
Grapevine Run Headwaters	Hampton Falls	113.50	45.40	5
Hampton Falls River Complex	Hampton Falls	40.50	35.64	6
Dodge Ponds Complex	Hampton Falls	73.50	27.20	7
Grapevine Run Complex	Hampton Falls	40.70	21.57	8
Taylor River Complex (Central)	Hampton Falls	244.90	0.00	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Sediment Trapping Value
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Sediment Part B	Rank
Taylor River Complex (East)	Hampton	327.60	277.95	1
Old River Complex	Hampton	157.30	72.36	2
Lamprey Pond Complex	Hampton	111.00	59.94	3
Old Millpond Complex	Hampton	69.50	51.75	4
Line Swamp Complex	Hampton	131.10	41.95	5
Drakes River/Coffin Pond Complex	Hampton	45.20	36.16	6
Smith Colony Complex	Hampton	65.90	34.27	7
Taylor River Complex (Central)	Hampton Falls	244.90	220.41	1
Taylor River Complex (West)	Hampton Falls	221.40	161.62	2
Winkley Brook Complex	Hampton Falls	206.40	160.99	3
Taylor River Headwaters	Hampton Falls	141.50	127.35	4
Grapevine Run Headwaters	Hampton Falls	113.50	91.93	5
The Cove Complex	Hampton Falls	186.90	76.63	6
Dodge Ponds Complex	Hampton Falls	73.50	49.98	7
Grapevine Run Complex	Hampton Falls	40.70	38.67	8
Hampton Falls River Complex	Hampton Falls	40.50	23.49	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Nutrient Attenuation Value
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Nutrient Attenuation	Rank
Taylor River Complex (East)	Hampton	327.60	274.68	1
Old River Complex	Hampton	157.30	117.98	2
Lamprey Pond Complex	Hampton	111.00	78.81	3
Line Swamp Complex	Hampton	131.10	72.11	4
Old Millpond Complex	Hampton	69.50	47.61	5
Smith Colony Complex	Hampton	65.90	40.20	6
Drakes River/Coffin Pond Complex	Hampton	45.20	31.64	7
Taylor River Complex (Central)	Hampton Falls	244.90	208.17	1
Taylor River Complex (West)	Hampton Falls	221.40	179.33	2
Winkley Brook Complex	Hampton Falls	206.40	146.54	3
Taylor River Headwaters	Hampton Falls	141.50	120.28	4
The Cove Complex	Hampton Falls	186.90	114.01	5
Grapevine Run Headwaters	Hampton Falls	113.50	80.58	6
Dodge Ponds Complex	Hampton Falls	73.50	58.80	7
Grapevine Run Complex	Hampton Falls	40.70	36.63	8
Hampton Falls River Complex	Hampton Falls	40.50	25.52	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Shoreline Anchoring and Dissipation of Erosive Forces Value
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Anchoring/ Erosive	Rank
Taylor River Complex (East)	Hampton	327.60	4.00	1
Old Millpond Complex	Hampton	69.50	1.21	2
Drakes River/Coffin Pond Complex	Hampton	45.20	1.20	3
Smith Colony Complex	Hampton	65.90	0.62	4
Lamprey Pond Complex	Hampton	111.00	0.04	5
Old River Complex	Hampton	157.30	0.00	6
Line Swamp Complex	Hampton	131.10	0.00	6
Taylor River Complex (West)	Hampton Falls	221.40	4.00	1
Taylor River Complex (Central)	Hampton Falls	244.90	3.44	2
Winkley Brook Complex	Hampton Falls	206.40	1.44	3
Taylor River Headwaters	Hampton Falls	141.50	1.25	4
Hampton Falls River Complex	Hampton Falls	40.50	1.00	5
Grapevine Run Complex	Hampton Falls	40.70	0.79	6
Dodge Ponds Complex	Hampton Falls	73.50	0.75	7
Grapevine Run Headwaters	Hampton Falls	113.50	0.62	8
The Cove Complex	Hampton Falls	186.90	0.00	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Urban Wildlife Habitat Value
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Urban Wildlife	Rank
Taylor River Complex (East)	Hampton	327.60	310.65	1
Old River Complex	Hampton	157.30	97.53	2
Lamprey Pond Complex	Hampton	111.00	69.93	3
Old Millpond Complex	Hampton	69.50	62.10	4
Line Swamp Complex	Hampton	131.10	57.68	5
Drakes River/Coffin Pond Complex	Hampton	45.20	40.68	6
Smith Colony Complex	Hampton	65.90	34.27	7
Taylor River Complex (Central)	Hampton Falls	244.90	232.66	1
Taylor River Complex (West)	Hampton Falls	221.40	221.40	2
Winkley Brook Complex	Hampton Falls	206.40	177.50	3
Taylor River Headwaters	Hampton Falls	141.50	127.35	4
The Cove Complex	Hampton Falls	186.90	125.22	5
Grapevine Run Headwaters	Hampton Falls	113.50	90.80	6
Hampton Falls River Complex	Hampton Falls	40.50	40.50	7
Grapevine Run Complex	Hampton Falls	40.70	38.67	8
Dodge Ponds Complex	Hampton Falls	73.50	6.62	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Urban Educational Opportunity
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Urban Educational Opportunity	Rank
Taylor River Complex (East)	Hampton	327.60	10.00	1
Old Millpond Complex	Hampton	69.50	10.00	1
Smith Colony Complex	Hampton	65.90	10.00	1
Lamprey Pond Complex	Hampton	111.00	7.56	4
Drakes River/Coffin Pond Complex	Hampton	45.20	5.04	5
Old River Complex	Hampton	157.30	3.00	6
Line Swamp Complex	Hampton	131.10	2.80	7
Winkley Brook Complex	Hampton Falls	206.40	12.60	1
Dodge Ponds Complex	Hampton Falls	73.50	12.60	1
Taylor River Complex (Central)	Hampton Falls	244.90	6.30	3
Taylor River Complex (West)	Hampton Falls	221.40	5.04	4
Grapevine Run Complex	Hampton Falls	40.70	4.00	5
Taylor River Headwaters	Hampton Falls	141.50	3.15	6
Grapevine Run Headwaters	Hampton Falls	113.50	3.15	6
Hampton Falls River Complex	Hampton Falls	40.50	1.89	8
The Cove Complex	Hampton Falls	186.90	0.00	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Urban Visual and Aesthetic Value
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Urban Visual Aesthetic	Rank
Old River Complex	Hampton	157.30	15.00	1
Old Millpond Complex	Hampton	69.50	14.40	2
Lamprey Pond Complex	Hampton	111.00	13.50	3
Taylor River Complex (East)	Hampton	327.60	10.80	4
Line Swamp Complex	Hampton	131.10	10.80	4
Drakes River/Coffin Pond Complex	Hampton	45.20	9.00	6
Smith Colony Complex	Hampton	65.90	4.32	7
Winkley Brook Complex	Hampton Falls	206.40	19.00	1
Grapevine Run Complex	Hampton Falls	40.70	18.00	2
Dodge Ponds Complex	Hampton Falls	73.50	16.20	3
Taylor River Complex (Central)	Hampton Falls	244.90	14.40	4
Grapevine Run Headwaters	Hampton Falls	113.50	10.80	5
Hampton Falls River Complex	Hampton Falls	40.50	7.20	6
Taylor River Headwaters	Hampton Falls	141.50	6.00	7
The Cove Complex	Hampton Falls	186.90	5.40	8
Taylor River Complex (West)	Hampton Falls	221.40	0.90	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Urban Recreational Value
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Urban Recreation	Rank
Taylor River Complex (East)	Hampton	327.60	76.05	1
Line Swamp Complex	Hampton	131.10	62.93	2
Old Millpond Complex	Hampton	69.50	43.47	3
Drakes River/Coffin Pond Complex	Hampton	45.20	12.60	4
Lamprey Pond Complex	Hampton	111.00	6.48	5
Old River Complex	Hampton	157.30	0.00	6
Smith Colony Complex	Hampton	65.90	0.00	6
Taylor River Complex (Central)	Hampton Falls	244.90	159.19	1
Taylor River Complex (West)	Hampton Falls	221.40	146.12	2
Winkley Brook Complex	Hampton Falls	206.40	127.97	3
The Cove Complex	Hampton Falls	186.90	104.66	4
Taylor River Headwaters	Hampton Falls	141.50	89.15	5
Grapevine Run Headwaters	Hampton Falls	113.50	68.10	6
Hampton Falls River Complex	Hampton Falls	40.50	26.73	7
Grapevine Run Complex	Hampton Falls	40.70	19.60	8
Dodge Ponds Complex	Hampton Falls	73.50	8.19	9

Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Noteworthiness
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Noteworthiness	Rank
Taylor River Complex (East)	Hampton	327.60	327.00	1
Old Millpond Complex	Hampton	69.50	69.00	2
Old River Complex	Hampton	157.30	0.00	3
Line Swamp Complex	Hampton	131.10	0.00	3
Lamprey Pond Complex	Hampton	111.00	0.00	3
Smith Colony Complex	Hampton	65.90	0.00	3
Drakes River/Coffin Pond Complex	Hampton	45.20	0.00	3
Taylor River Complex (Central)	Hampton Falls	244.90	244.90	1
Taylor River Complex (West)	Hampton Falls	221.40	221.40	2
Winkley Brook Complex	Hampton Falls	206.40	206.40	3
The Cove Complex	Hampton Falls	186.90	186.90	4
Taylor River Headwaters	Hampton Falls	141.50	141.50	5
Grapevine Run Headwaters	Hampton Falls	113.50	113.50	6
Dodge Ponds Complex	Hampton Falls	73.50	73.50	7
Grapevine Run Complex	Hampton Falls	40.70	40.70	8
Hampton Falls River Complex	Hampton Falls	40.50	40.50	9

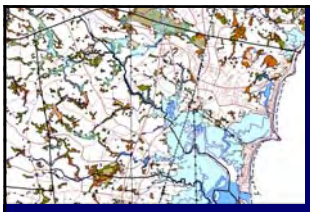
Towns of Hampton and Hampton Falls Prime Wetland Inventory
Wetland Areas Ranked by Historical Potential
January 2006

Wetland Name/Code	Town	Total Area of Wetland	Historical Potential	Rank
Taylor River Complex (East)	Hampton	327.60	163.50	1
Lamprey Pond Complex	Hampton	111.00	50.00	2
Old Millpond Complex	Hampton	69.50	16.02	3
Drakes River/Coffin Pond Complex	Hampton	45.20	10.60	4
Line Swamp Complex	Hampton	131.10	6.56	5
Smith Colony Complex	Hampton	65.90	3.75	6
Old River Complex	Hampton	157.30	0.00	7
Taylor River Headwaters	Hampton Falls	141.50	15.00	1
Dodge Ponds Complex	Hampton Falls	73.50	15.00	1
Grapevine Run Complex	Hampton Falls	40.70	15.00	1
Hampton Falls River Complex	Hampton Falls	40.50	10.13	4
Taylor River Complex (Central)	Hampton Falls	244.90	9.00	5
Grapevine Run Headwaters	Hampton Falls	113.50	7.50	6
Winkley Brook Complex	Hampton Falls	206.40	6.25	7
Taylor River Complex (West)	Hampton Falls	221.40	3.80	8
The Cove Complex	Hampton Falls	186.90	0.00	9

Appendix II
NH Method Data Sheets

not available electronically
on file at New Hampshire Estuaries Project office

Appendix D



Prime Wetlands Designation for Hampton & Hampton Falls

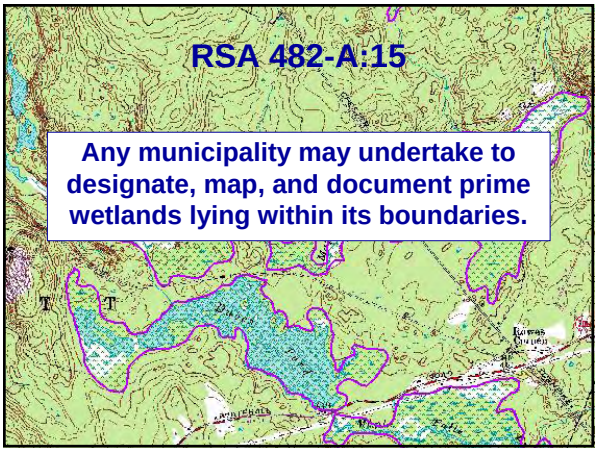
Sandy Crystall
DES Wetlands Bureau
March 2006

Introduction

- Wetlands protection in New Hampshire
- New Hampshire's prime wetlands designation
  - Process
  - Effect

Function and Values

- Sources of nutrients for finfish, crustacea, shellfish and wildlife
- Habitats and reproduction areas for plants, fish and wildlife
- Commerce, recreation and aesthetic enjoyment
- Adequate groundwater levels
- Ability to handle the runoff of waters
- Natural ability of wetlands to absorb flood waters and silt
- Interests of the general public



RSA 482-A:15

Any municipality may undertake to designate, map, and document prime wetlands lying within its boundaries.

What Activities Require a Permit?

Dredge **Construction** **Fill**

Protected Resources

- Freshwater wetlands
- Tidal wetlands
- Surface waters and banks
- Sand dunes
- Upland tidal buffer zone
- Uplands adjacent to prime wetlands

How Do You Know If It Is A Wetland ?

"under normal circumstances"

- Water at or near the surface
- Hydric soils
- Prevalence of wetland vegetation

1987 Corps of Engineers manual
2004 v3 Field Indicators for Identifying Hydric Soils
1988 USFWS Plant List

Municipalities with Designated Prime Wetlands

- Andover
- Barrington
- Bow
- Brookline
- Derry
- Enfield
- Exeter
- Fremont
- Gilford
- Goffstown*
- Holderness
- Hooksett
- Meredith
- Nashua
- Northwood
- New London
- Pelham
- Salem
- Sanbornton
- Sandwich
- Tamworth
- Weare
- Wolfeboro

* in process

What Qualifies as a Prime Wetland?

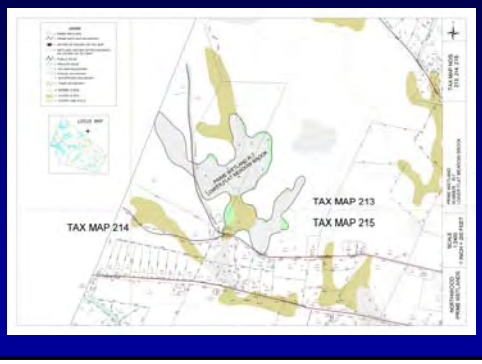
- The "wetter" wetlands....
  - At least 50% very poorly drained soils
- Of substantial significance
  - size
  - unspoiled character
  - fragile condition
  - other relevant factors

Why Designate Prime Wetlands?

- Affords an increased level of protection to valuable resources.
  - Specific permitting requirements
  - Educational component

Evaluation of Wetland Function & Values

Prime Wetlands Map



Why Prime Wetlands?

- The Salt Marsh protects our Town from flooding during storm events.
- It filters out contaminants before they enter the Ocean ecosystem.
- A healthy marsh supports huge numbers of shore birds and migrating waterfowl and large numbers of other wildlife.
- Designation will add a small layer of protection to this valuable resource.

For more info please contact the Conservation Commission at 929-5808

Post-study Process

- Local requirements to adopt prime wetlands follow those of zoning ordinances (RSA 675: 2 or 675: 3)
- Residents vote at town meeting to accept designation of prime wetlands
- DES review of maps and report, and approval

Permitting Process After Prime Wetlands Designation

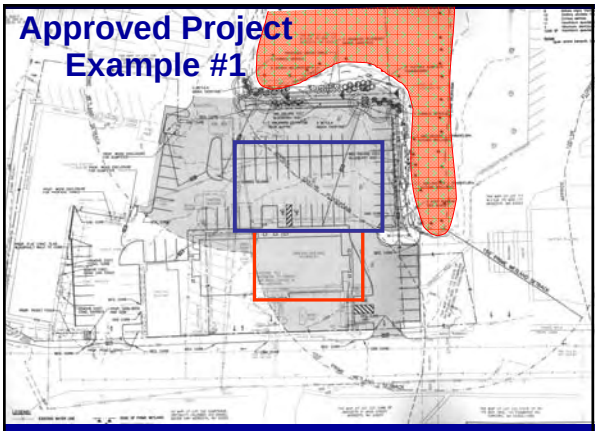
For projects proposed In or adjacent to prime wetlands:

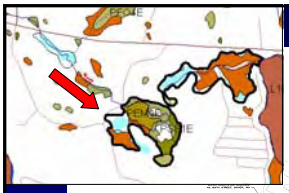
- DES classifies as “major” project.
- Applicant must show need for project and meet requirements for thorough review [20 questions listed in Wt 302.04].
- DES
  - conducts field inspection of site.
  - holds public hearing
- Corps reviews project under SPGP

Prime Wetlands Permit Approval

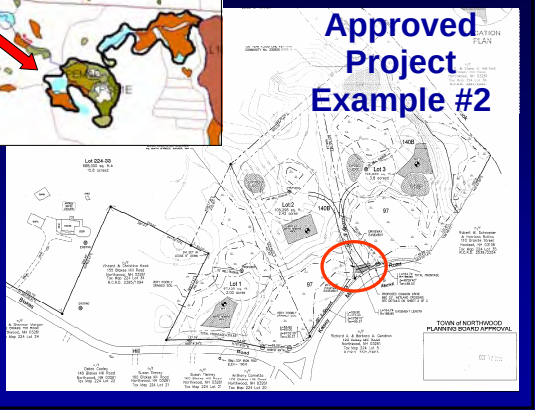
- The proposed activity, either alone or in conjunction with other human activity, cannot result in the significant net loss of any of the values.
- If compensatory mitigation is required, locate it:
  - within the physical boundaries of the project, where possible;
  - offsite, if it cannot occur onsite

Approved Project Example #1





Approved Project Example #2



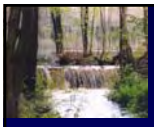
Denied Project Example # 1

Summary

- Why protect wetlands through prime wetlands designation?
  - Wetlands provide many functions and values – and most of these may not be visible until they are gone!
- How will prime wetlands designation affect development?
  - Designation may affect the scope of some projects, depending on the type of project, footprint, or activity level.

Publications/Resources

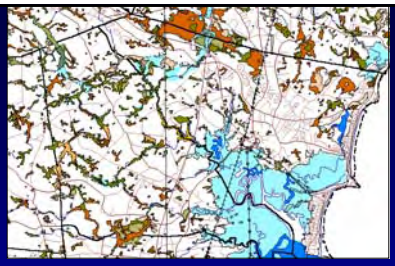
- NH Nontidal Method
  (5.7 Mb file - fast connection only!)
  http://www.nh.nrcs.usda.gov/news/publications.html
- Highway Methodology Workbook Supplement
  http://www.nae.usace.army.mil/reg/
- NH Towns report (Natural Heritage Bureau Town-specific data)
  http://nh.gov/dred/divisions/forestandlands/bureaus/naturalheritage/listsforms.htm
- Wetlands – Functions and Values
  http://www.epa.gov/watertrain/wetlands/



For Further Information

- Inspector of the Day (general questions)
- Pre-application meetings (for prospective applicants and conservation commissions, etc.)
- DES website
- Other towns!

www.des.nh.gov/wetlands
wetmail@des.state.nh.us
(603) 271-2147



Prime Wetlands Designation for Hampton

Edited for the Hampton Conservation Commission

Sandy Crystall
DES Wetlands Bureau
March 2006

Introduction

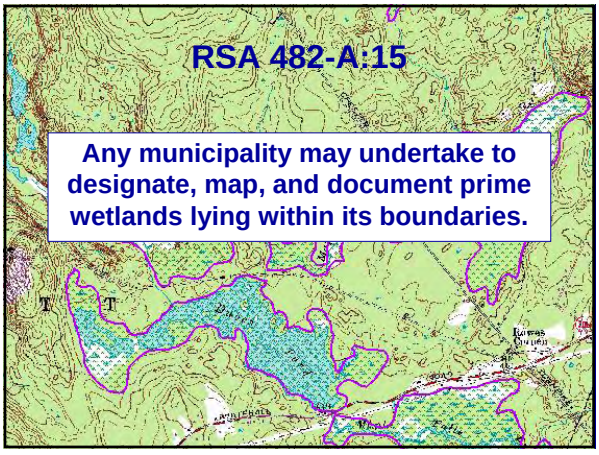
- Wetlands protection in New Hampshire
- New Hampshire's prime wetlands designation
  - Process
  - Effect

Law: RSA 482-A:1

"It is found to be for the public good ... to protect and preserve its submerged lands ... and its wetlands ... from despoliation and unregulated alteration because ... that would affect the value of these areas as..."

Law: RSA 482-A:1 (continued)

- Sources of nutrients for finfish, crustacea, shellfish and wildlife
- Habitats and reproduction areas for plants, fish and wildlife
- Commerce, recreation and aesthetic enjoyment
- Adequate groundwater levels
- Ability to handle the runoff of waters
- Natural ability of wetlands to absorb flood waters and silt
- Interests of the general public



What Activities Are Regulated In Jurisdiction?

Dredge Construction Fill

Protected Resources

- Freshwater wetlands
- Tidal wetlands
- Surface waters and banks
- Sand dunes
- Upland tidal buffer zone
- Uplands adjacent to prime wetlands

How Do You Know If It Is A Wetland ?

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What Qualifies as a Prime Wetland?

- The "wetter" wetlands....
  - At least 50% very poorly drained soils
- Of substantial significance
  - size
  - unspoiled character
  - fragile condition
  - other relevant factors

Why Designate Prime Wetlands?

- Affords an increased level of protection to valuable resources.
- Specific permitting requirements
  - More information required -- provides greater scrutiny
  - Public involvement
- Educational component

Designation Affords an Increased Level of Protection.

- Projects in or adjacent to prime wetlands are considered major impact projects.
  - DES
    - Must conduct a field inspection.
    - Must hold a public hearing.

How do we evaluate wetlands for designation as prime?

Hampton and Hampton Falls worked together on a Grant from the NH Estuaries Project to develop a comprehensive wetlands inventory.

The final outcome of study will be to have each town adopt some or all of the Prime Wetlands Candidates as Prime Wetlands with a Town Meeting vote.

Residents Vote at Town Meeting to Accept Designation of Prime Wetlands

Town Meeting Article

- **ARTICLE FOR 2007 TOWN MEETING**
- Shall the Town of Hampton adopt the Planning Board Article to designate Prime Wetlands to the Salt Marsh a local option under RSA 482-A:15, as delineated by Town of Hampton and Hampton Falls Prime Wetlands Study and Mapping by Gove Environmental Services, Inc., and dated December 2005 as recommended by the Hampton Conservation Commission.
- ***Recommended by the Planning Board***

Prime Wetlands Shown on Tax Map

DES Review

- Reviews submission (report, score sheets, and format).
- Acts upon the proposed designation
  - DES issues letter to municipality
  - Publishes decision in weekly decision report.
- Maintains the maps and report
- Provides public access during regular business hours.

Permitting Process After Prime Wetlands Designation

Projects Proposed In or Adjacent to Prime Wetlands

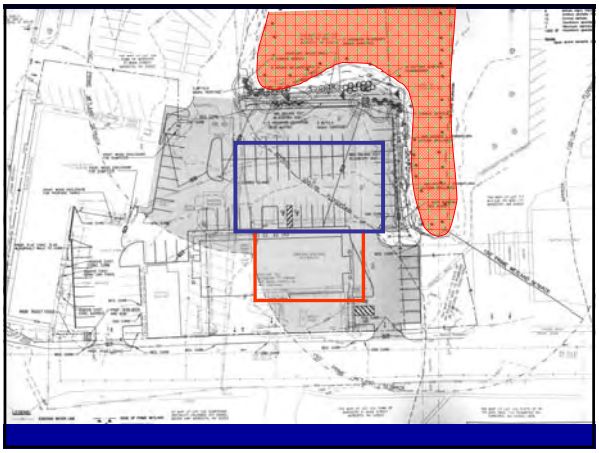
- DES classifies as “major” project.
- Applicant must show need for project and meet requirements for thorough review [20 questions listed in Wt 302.04].
- DES wetlands inspector conducts field inspection of site.
- DES holds public hearing

Permit Approval

- DES can approve such projects only if the proposed activity, either alone or in conjunction with other human activity, will not result in the significant net loss of any of the values.

Compensatory Mitigation

- Locate within the physical boundaries of the project, where possible and appropriate;
- Consider off-site mitigation if it cannot occur on site (if certain conditions are met and it provides equal or greater value).



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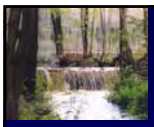
  http://www.nhdfl.org/formgt/nhiweb/Documents/w_town.pdf



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Prime Wetlands History in Hampton

- The Conservation Commissions of Hampton and Hampton Falls have been working on a prime wetlands study between the two Towns since 2004.
- The Hampton Conservation Commission will be putting forth an article for Town Meeting 2007 to designate the Salt Marsh as a Prime Wetland.

Next Step

- The Commission will evaluate the remaining wetlands complexes recommended by the Gove Study and determine which if any should next be designated as Prime Wetlands.
- Any one wishing to view the Gove Study may contact the Conservation Commission.